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The OIL and GAS JOURNAL

PRODUCING REFINING ENGINEERING MARKETING

Published Every Thursday TULSA, OKLAHOMA, AUGUST 15, 1929 $6.00 a Year

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Eight 500-Bbl. Maloneys on the T. B. Slick Franks Farm, Seminole, Okla.

MORE MONEY FOR YOUR OIL

when stored in MALONEY *Vapor-Pressure* Tanks

MALONEY FEATURES

1. Made of rust-resisting Keystone Copper steel.
2. Maloney patented close fitting "crimp" seams and joints.
3. Maloney pliable rubber gasketing and Gaso cement.
4. All seams, including deck seams, reinforced with rigid steel channels.
5. Special bolts of 90,000 pounds tensile strength.
6. Large cleaning out plates set flush with bottoms.
7. Howell aluminum "4-in-1" Vacuum Pressure Valve and Thief Hatch.
8. Maloney special pearl gray paint.
9. Sizes 12 to 10,000 barrels.
10. Packed in steelbound crates for export.

OFFICIAL government tests on lease storage have shown that loss of gravity in crude oil is greatly reduced by storing under 14 to 16 ounces pressure to hold the vapors, and by the use of light colored paint on tanks to prevent excessively high temperatures and temperature variations.

MALONEY *Vapor-Pressure Tanks*, equipped with a pressure valve set at 16 ounces and a vacuum valve set at ½ ounce or more, and painted with Maloney special pearl gray paint provide the type of equipment which is pointed out by the government experts as needful to minimize breathing losses. By maintaining the gravity of the crude oil, this equipment enables the operator to get more money for his oil.

The Maloney Tank Mfg. Company announces Bolted Steel Tanks conforming with dimensional standards, A. P. I., and carrying the official A. P. I. monogram.

"Alone in Quality"

MALONEY TANK MFG. CO.

Tulsa, Okla., U.S.A.

KEYSTONE AMERICAN

MALONEY PATENTED BOLTED CRIMP-TYPE TANKS

MALONEY

Advertisers' Index on Page 33 Table of Contents on Page 34

A Typical Atlantic Pipe Line Co., Electric Pumping Station

Here are Some of the Reasons for the Rapid Trend to Purchased ELECTRIC POWER for Pipe Line Pumping

- lower installation cost
- lower maintenance cost
- lower labor cost
- lower total cost per barrel pumped
- greater over all efficiency
- dependable service
- reduced investment hazard

Let Us Give You the Details Without Obligation

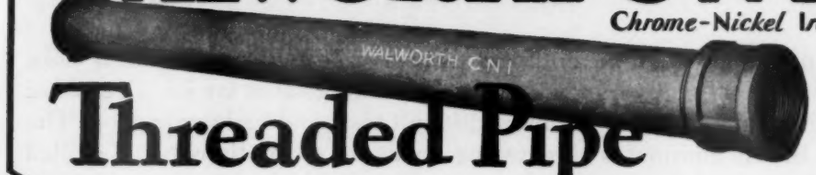
TEXAS POWER & LIGHT CO.

General Offices: INTERURBAN BUILDING--DALLAS

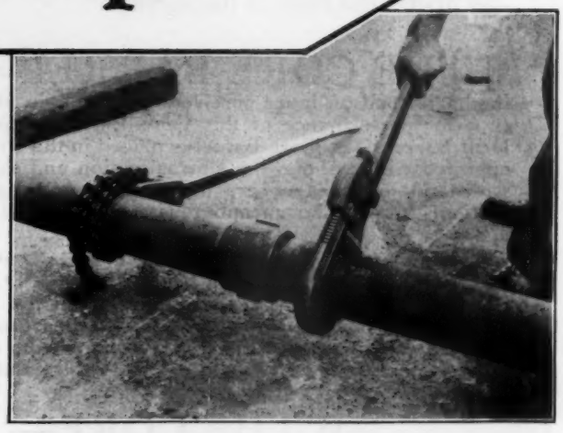
Providing for the Texas of Today—
Planning for the Texas of Tomorrow

WALWORTH C·N·I

Chrome-Nickel Iron



Threaded Pipe



Easy to cut and thread—

THE new Walworth C.N.I. (Chrome Nickel Iron) Threaded Pipe can be cut and threaded anywhere within its own length with either hand or power tools.

Hand pipe tools can also be used in making up C.N.I. pipe. No calking is necessary. The pipe is easily welded, with welded joints even stronger than the pipe.

The pipe is furnished in welded lengths, or in five foot lengths, threaded and coupled; or with plain ends, grooved ends, or beveled ends for field welding. Every length is air tested under water.

Easy to make up right on the job

C.N.I. pipe is available in 1½" - 2" 2½" - 3" - 4" - 5" and 6" sizes.

At the Sixth International Petroleum Exposition and Congress, Tulsa, Oklahoma

In booths 104, 105, 106 and 107, Oklahoma Building, Walworth is showing a complete line of valves, fittings and tools, and Walworth C.N.I. Pipe.

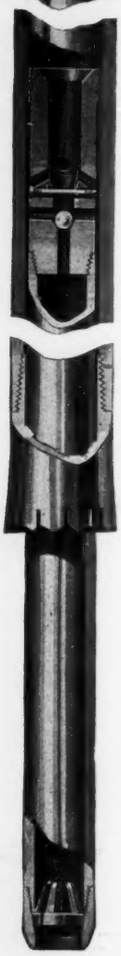
WALWORTH

Walworth Company, General Sales Offices: 51 East 42nd St., New York
Plants at Boston, Mass.; Kewanee, Ill.; Greensburg, Pa.; and Attalla, Ala.

Distributors in Principal Cities of the World

Walworth International Co., 11 Broadway, New York, Foreign Representative
Walworth Company, Limited, 620 Cathcart St., Montreal, P. Q.

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Okla., under the Act of March 3, 1879.



Baker Standard Core Barrel with Core Barrel extended partly to show construction.

"We regard the Performance of this Core Barrel as Quite Remarkable—especially considering Hardness of Formation being cored"

This, the comment of one of the enthusiastic users of the Baker Standard Core Barrel, is only one of many hundreds of similar expressions we have received after it had been submitted to the most difficult tests and had made good. The Baker Core Barrel eliminates all guessing about the formations being drilled —it brings the facts to the surface.

¶ THE CORE BARREL—

The Baker Standard Core Barrel consists of two main parts—an outer drilling barrel and an inner core-retaining tube, as shown in the illustration at the left. The superior performance of this Core Barrel is due to the valve shown in the head of the Drill Barrel. The Core Barrel is placed in the string in the same position as the bit, and is operated with a somewhat slower motion and shorter stroke than the drilling bit. It will withstand the most severe usage that can be given with this shorter stroke and slow motion. It will take uncontaminated cores in all formations, whether hard or soft.

¶ THE CORE EXTRACTOR—

The Baker Two-Stage Hydraulic Core Extractor is illustrated below, with the piston shown in the low pressure position. The simple half-turn throw of the catch engages the high pressure piston. The Sub is made with both male and female threads, for extraction of core from either end of Core Retaining Tube. The Core Pusher Plunger fits snugly in Core Retaining Tube. Tongs are also shown.

¶ THE CORE—

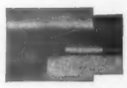
The illustration at the right, which is taken from the photograph of an actual core taken with the Baker Standard Core Barrel, shows the clean-cut, uncontaminated form in which the core is brought to the surface. The form in which the core is recovered depends, of course, on the character of the formation being drilled but, working under either easy or very difficult conditions, the Baker Standard Core Barrel will bring to the surface an accurate and dependable cross section of the formation.

Sample of cores taken with Baker Standard Core Barrel in formations which were too hard for coring with rotary core barrel.

Full Line on Display Booth No. 99 Oklahoma Building

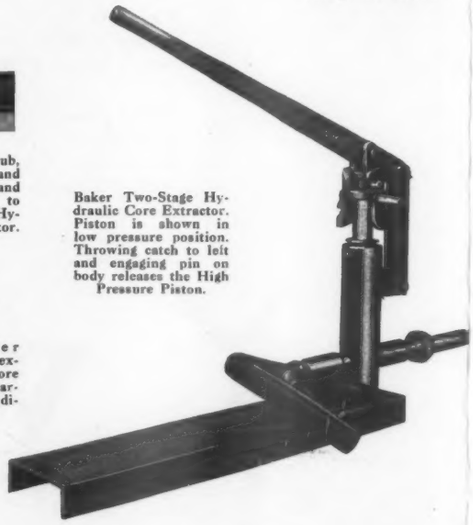
¶ ACCESSORIES—

For the proper and most efficient use of the Baker Standard Core Barrel we have designed certain necessary accessories, here illustrated. They promote the efficient use of the Barrel and the extraction of the core. For complete information regarding the ordering and use of this Core Barrel equipment request the detailed catalog section.

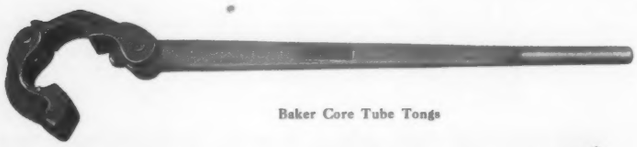


New style Sub, with both male and female threads and inner threads to connect with Hydraulic Extractor.

Core Pusher Plunger — for extracting the core from the Core Barrel in good condition.



Baker Two-Stage Hydraulic Core Extractor. Piston is shown in low pressure position. Throwing catch to left and engaging pin on body releases the High Pressure Piston.



Baker Core Tube Tongs

Baker Drill Barrel Tongs

Your Guess May Be Good—But Coring Means Positive Knowledge of Formations

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25 Broadway, New York City

BAKER OIL TOOLS, INC.
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California Branches
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Mid-Continent Distributors
B. & A. SPECIALTY CO.
220 E. Brady St., Tulsa, Okla.
2301 Commerce St., Houston, Texas

Baker Standard Core Barrel is Universally Accepted as the Standard of Coring Performance

"I Can't Imagine ANY Threading Machine Being Better Than a Landis"

—says August Stultz of McDowell & Company, Pittsburgh, Penna., well known jobbers of pipe and Oil Country Tubular Goods.

Operators of Landis Pipe Threading and Cutting Machines invariably feel that way. Quick change features eliminate lost time in making set-ups. High speed operation enables them to get work out on time and keep ahead of rush orders. They know that every thread they cut will pass the most rigid inspection—no re-cutting or taking a second pass.

Landis Pipe Threading and Cutting Machines are designed to produce accurate threads—cleanly cut, well formed and correctly tapered for their entire length. That a Landis operates—even on a production basis—with a remarkably low chaser cost is equally a matter of design—distinctive to Landis alone.

Landis performance can not be duplicated!

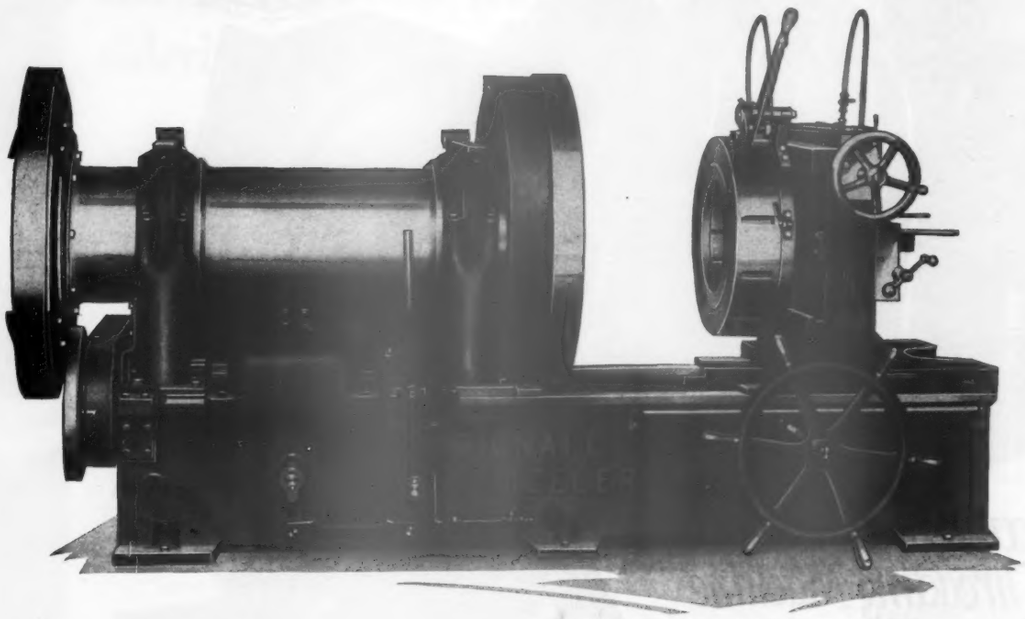
Write us for the details.

LANDIS MACHINE COMPANY, Inc.

Waynesboro, Penna., U. S. A.

REPRESENTED IN THE DOMESTIC OIL FIELDS BY: Colcord-Wright Machinery & Supply Co., St. Louis, Mo.; D. S. Mair Machinery Co., Houston, Tex.; Woodward, Wight & Co., New Orleans, La.; Herberts Machinery & Supply Co., Los Angeles; Herberts Moore Machinery Co., San Francisco, Calif.; Hendrie & Bolthoff Mfg. & Supply Co., Denver, Colo.

Exceptional Performance and Durability



New No. 12 Duplex Pipe Machine has 15¼" bore and handles from 4" to 13⅜" pipe. Carriage travel, 32 inches.

Feature Newest B & K Threading Machines

The new Bignall and Keeler No. 12 Duplex Pipe Threading Machine has so many advantages and new features that all of them cannot be stated in a short space. However, a few of them include:

Bed and lower half of gear case cast in one piece.
Two sets of shifting gears are provided.
Two-way positive clutch for 8 speed changes.
Wide face, steel, machine-cut gears.
Threads cut within 2" of chuck face.
Pipe cut off within 13" of chuck face.
Beveled, high speed cut-off tool.
Combination reaming and beveling tool.
9 sets of R.H. pipe dies are standard equipment.
Sliding type die-head can be arranged for dies 2-11/16", 3-7/16", and 4-7/16" wide.

Send for our latest catalog. No obligation.

Bignall & Keeler Machine Works

PEERLESS B&K DUPLEX P.D.Q.C

of the N. O. Nelson Mfg. Co.

EDWARDSVILLE, ILLINOIS

PEERLESS B&K DUPLEX P.D.Q.C

O&GJ 8-15 Gray

How Good Should a Gate Valve be?

Ask any man in your line. And if he answers—"as good as a Darling" you'll know he has given the question of gate valves the study it deserves, made some actual comparisons and checked up on results.

You don't have to use a Darling Gate Valve to appreciate its merits. Even a casual inspection of its features gives a thorough understanding of Darling's advantages. Yet, until Darling Gate Valves are actually at work for you, you'll never realize the extent of the saving, service and satisfaction these features make possible.

If every gate valve was "as good as a Darling" any gate valve would be "good enough." But the Darling user doesn't think they are. That's why he sticks to Darlings.

DARLING VALVE & MANUFACTURING COMPANY
Williamsport, Pa.

New York Chicago Oklahoma City Houston

Mid-Continent Distributors:

Frick-Reid Supply Corp. Atlas Supply Co.
International Supply Co. Happy Belting Co. Petroleum Supply Co.

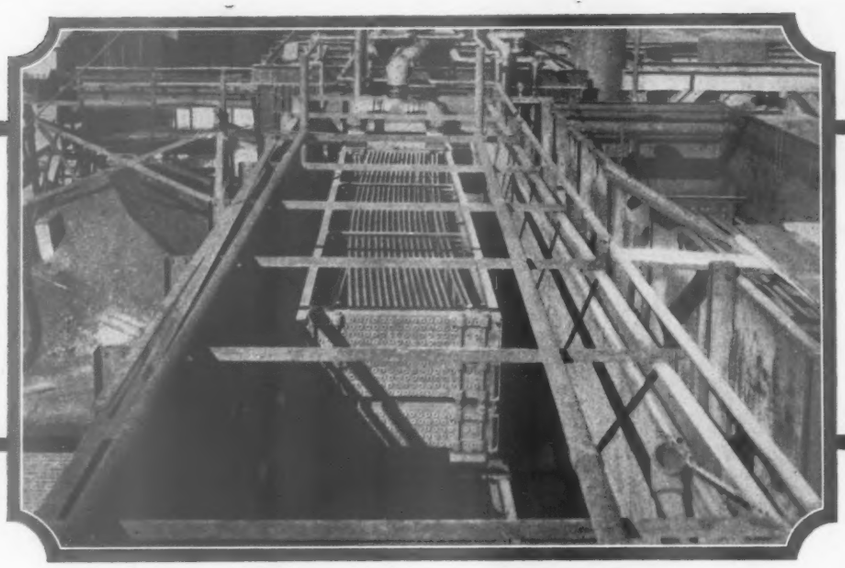
California Distributor:

Petroleum Equipment Co., Los Angeles

DARLING
GATE VALVES

465

The G-R Submerged Type Bentube Section



KENDALL REFINING COMPANY

BRADFORD, PA.

July 19th
1920.

The Griscom-Russell Company
911 Fulton Building
Pittsburgh, Pennsylvania

Gentlemen:

The seventeen 6"-240 G-R Bentube Sections ordered from you last fall to be used in cooling cylinder stock are bright stock have proven very satisfactory for the purpose to which they have been placed.

We are now able to pump out the still in about one-fifth the time formerly required, with the additional advantage of knowing that we are not oxidizing or coking the oil in the operation.

Yours very truly,
KENDALL REFINING COMPANY
By R.R. Kinney

"Saves 4/5 of cooling time"

THE remarkable improvement in service effected by G-R Submerged Type Bentube Sections at the Kendall Refining Company's plant is typical of the results obtained wherever these Sections replace other apparatus in tanks for condensing vapors from oils or for cooling residual oil.

No matter how hard, salt or dirty the available water supply may be, the patent construction of the G-R Bentube Section prevents scale from building up to a thickness that would reduce the cooling effect below rating. During operation of the Sections, scale is automatically and continuously flaked off by the changes in curvature of the tubes resulting from changes in temperature, and hand scaling is unnecessary even in severe service.

The Griscom-Russell Engineers will be glad to study your condensing and cooling processes without obligation to you and make recommendations for the application of G-R Submerged Bentube Sections with definite capacity guarantees which will enable you to make accurate comparison with the performance of your present apparatus.

PATENT NOTICE:—The G-R Bentube Section is fully protected by U. S. Patent 1,617,083.

THE GRISCOM-RUSSELL COMPANY
285 Madison Ave., New York

Philadelphia	Massillon		Charlotte	Kansas City
Boston	St. Louis		Memphis	San Francisco
Rochester	Minneapolis		Indianapolis	Los Angeles
Buffalo	Milwaukee		Cincinnati	Seattle
Pittsburgh	Detroit		Tulsa	Portland
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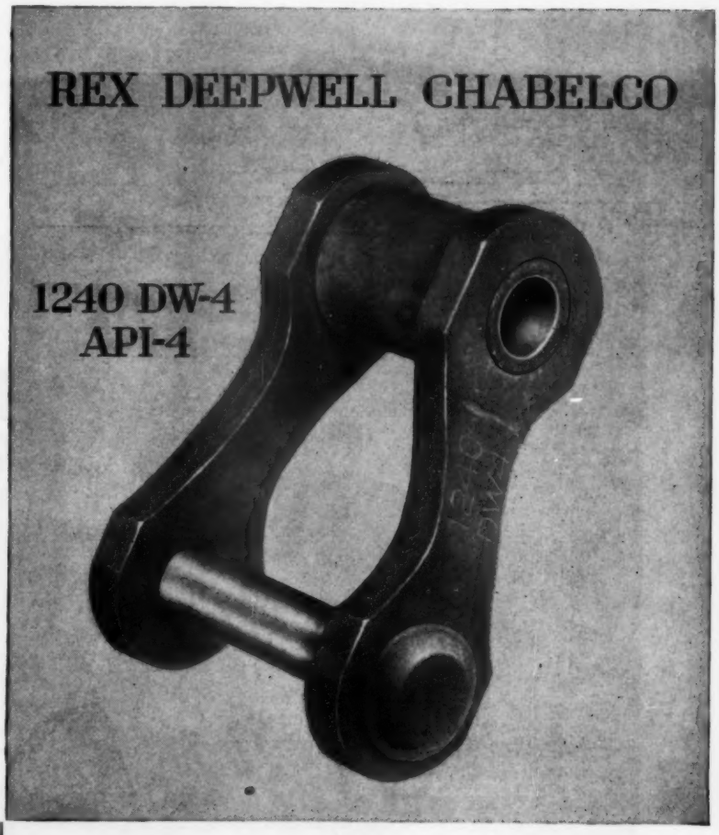
For Canada: Riley Engineering and Supply Co., Ltd., Toronto

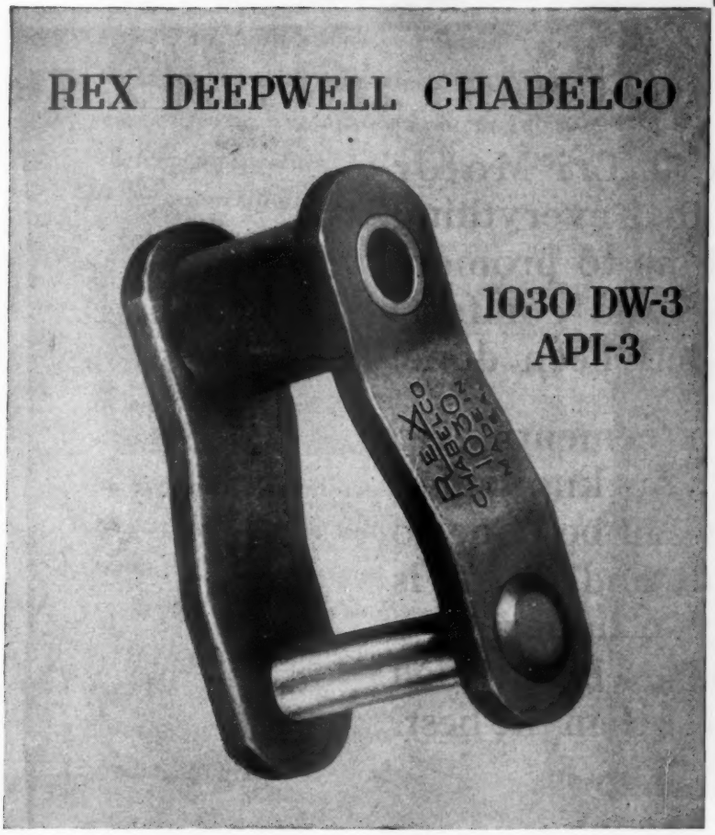
HEAT EXCHANGERS
CONDENSERS
Sub-cooling—Partial—Reflux
Shell-and-Tube, Atmospheric, and Condenser Box Types
COOLERS
Liquid—Gas—Jacket Water
Shell-and-Tube, Atmospheric, and Condenser Box Types
OIL HEATERS
LEVEL CONTROLLERS

Griscom-Russell

Heat Transfer Apparatus

THE GREATEST CHAIN THAT EVER HIT THE OIL FIELDS





STRENGTH HARDNESS PRECISION and the UNIT LINK

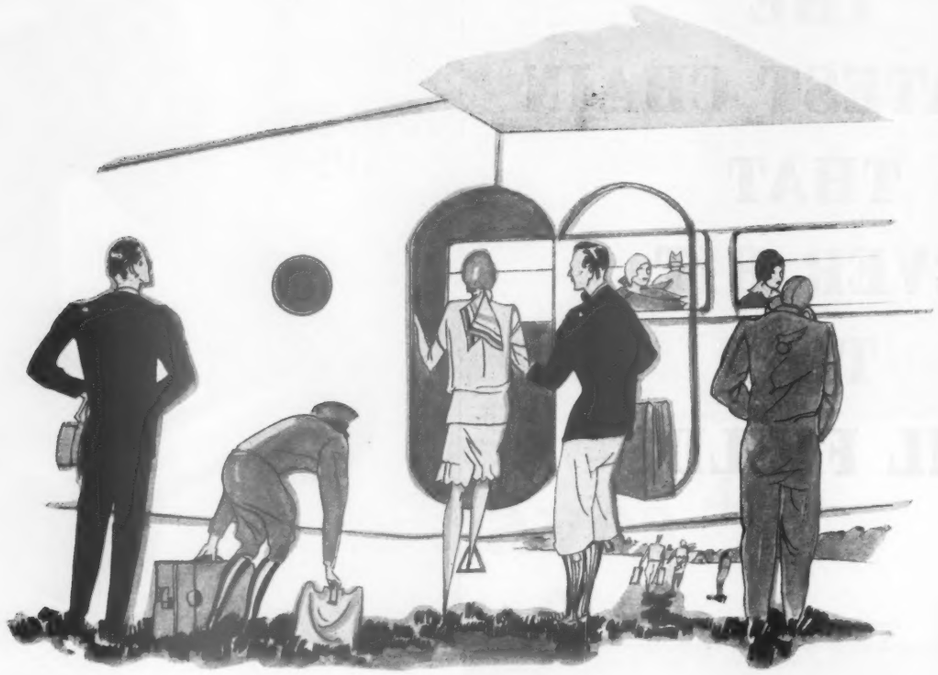
Heat-treated, alloy sidebars.
Nickel alloy Pins—case-hardened and ground.
Seamless Bushings—case-hardened and ground.
Seamless, heat-treated, alloy Rollers—
All combined with accurate Force Fit to Make The Unit Link That Stays A Unit.

Send for the folder that tells all about this better, stronger chain for oil well drilling.

REX CHAIN BELT COMPANY, 719 Park St., Milwaukee, Wis.
1000 Marine Bank Bldg., Houston, Texas 1414 Santa Fe Ave., Los Angeles, California

DEEP WELL
REX CHABELCO

STOCKS IN ALL ACTIVE OIL FIELDS



Entering a Ford Tri-Motor you know that everything that could be done to promote safe, dependable and comfortable air travel, has been done!

Entrusting your cementing to Halliburton, you know that everything that can be done to keep trouble out and oil in, is being done. In so important a matter, does it pay to be satisfied with anything less than the best?

HALLIBURTON OIL WELL CEMENTING CO.
Duncan, Oklahoma

"I tried out Ethyl a month before I began to sell it"

THE men who sell you gasoline—the men who know—use Ethyl themselves. And tell others about it. Every month more thousands of motorists try Ethyl—and tell their friends about it.

That is easy to understand. Ethyl is gasoline *plus*. To good gasoline has been added a vital ingredient—Ethyl fluid. This is the anti-knock compound, containing tetraethyl lead developed after years of research to make gasoline a more efficient motor fuel, and make possible high compression engines.

Outstanding oil companies are now mixing Ethyl fluid with their gasoline because *they* first tried it themselves, tested it exhaustively and proved that it did make their gasoline better.

Profit by the knowledge of experts and the experience of millions of car owners, and start riding with Ethyl today. It improves the performance of *any* car, whatever its age or type or compression.

Ethyl Gasoline Corporation, 25 Broadway, New York City; 56 Church Street, Toronto, Can.; 36 Queen Anne's Gate, London, England.

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ETHYL GASOLINE

Knocks out that "knock"

SMITHWELDED

A. O. SMITH CORPORATION

Oil & Gas Field Products Division

The SMITHWeld Bell and Spigot Joint
The SMITHWeld Steel Expansion Joint

Are four of the 44 interesting subjects dealt with in our new book on SMITHWelded Oil and Gas Line Pipe entitled—"The New Way"—the story of pipe production at 25 miles per day.

It also contains valuable engineering data on the application of SMITHWelded Line Pipe and the SMITHWeld Special Joints.

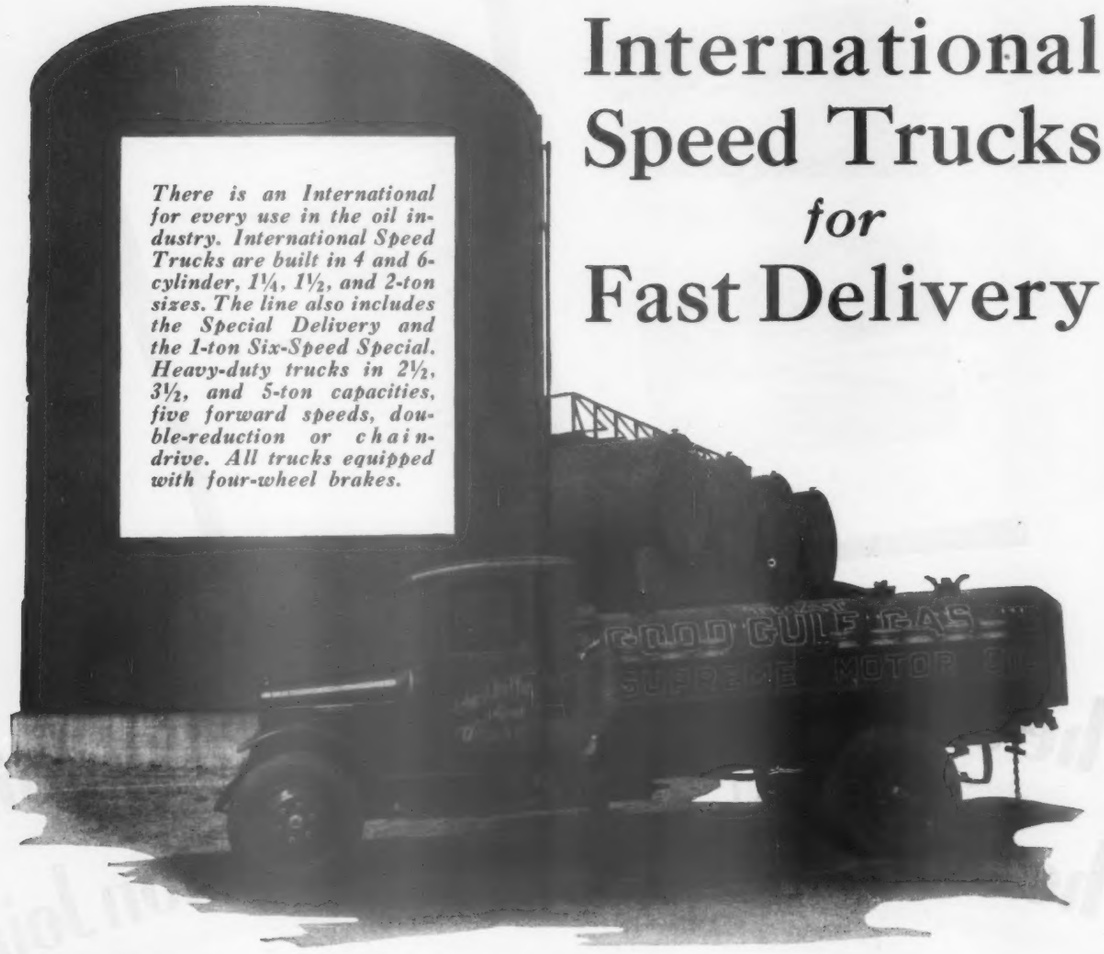
We will gladly send a copy to anyone interested in Oil and Gas Field Underground Transportation.

LINE PIPE

General Offices: Milwaukee, Wis.

District Offices at: New York • Pittsburgh • Tulsa • Houston • Los Angeles

International Speed Trucks *for* Fast Delivery


There is an International for every use in the oil industry. International Speed Trucks are built in 4 and 6-cylinder, 1¼, 1½, and 2-ton sizes. The line also includes the Special Delivery and the 1-ton Six-Speed Special. Heavy-duty trucks in 2½, 3½, and 5-ton capacities, five forward speeds, double-reduction or chain-drive. All trucks equipped with four-wheel brakes.

INTERNATIONAL Speed Trucks are doing a good job for the distributor in the oil business. You are constantly striving to increase your profits and to do so you must get full efficiency from trucks and drivers. The record of Internationals in the oil business for unusual economy of operation over a long period of years merits your close investigation.

Get into an International and know what it means to drive one. Hear the purr of the powerful engine, ready to haul the load — feel it drive away easily and speedily.

A quality truck sturdily constructed — fit to serve you as Internationals are serving the entire oil industry.

One of a fleet of International Heavy-duty trucks working in Georgia.

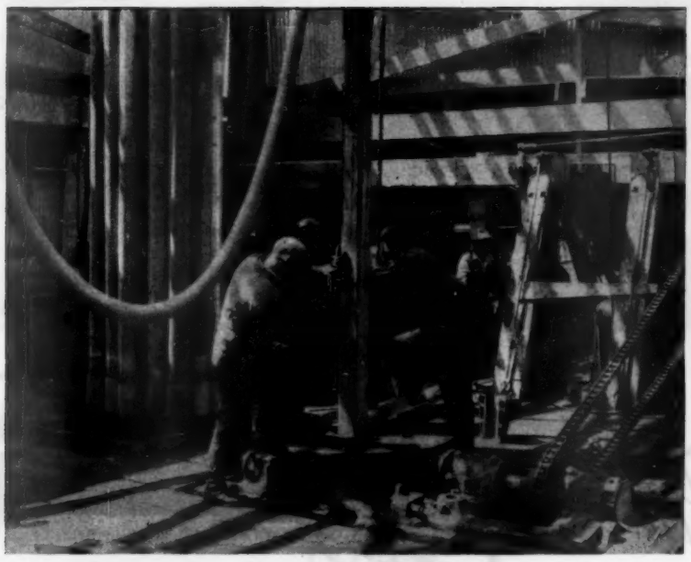
INTERNATIONAL

SERVICE must supplement the sale of every truck. Owners of Internationals are assured the best possible service through 172 Company-owned branches in the United States and Canada.

INTERNATIONAL HARVESTER COMPANY
of America (Incorporated)
606 So. Michigan Ave. Chicago, Ill.

INTERNATIONAL TRUCKS

For Maximum Footage at Lowest Cost



Goodyear Rotary Hose, on job after job, is the contractor's most dependable ally in obtaining maximum footage at lowest cost. For this standard hose is specially constructed to meet the service required.

It is much stronger than ordinary hose. It holds, trouble-free, the tremendous pressures employed in forcing the mud column down the drill stem and in backing the slush water and the sand up to the surface.

It is remarkably flexible too, yielding easily with the play of the tools. And it is reinforced at the end with two extra plies thus providing plenty of support for the couplings.

It resists the abrasive action of gritty and oily mud. It staunchly endures the persistent punishment of daily usage. For not only is it toughly compounded throughout; its carcass is reinforced with concealed and close-spaced wire winding for extra protection against pressure.

These special qualities of design and construction insure the superior serviceability and lasting economy of Goodyear Rotary Hose. They guarantee that Goodyear Rotary Hose, like all other Goodyear products, will protect our good name.

TRANSMISSION BELTS—*Cord Oil Well, Thor Oil Well, Goodyear, Wingfoot* • HOSE—*Air, Water, Steam, Gasoline, Fire, Mill* • OIL SUCTION *or* DISCHARGE HOSE • ROTARY HOSE • PACKING—*Asbestos and Rubber Sheet for both field and refinery service* • PUMP VALVES • SLUSH PUMP SLEEVES • SWAB RUBBERS.

The Greatest Name In Rubber

GOODYEAR

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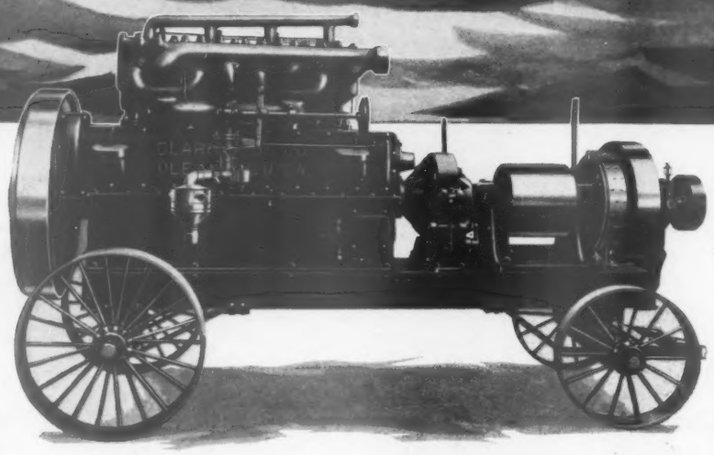
long service



The

CLARK DRILLING ENGINE

Like the sturdy, smooth running ocean liner, which goes for so many years without replacement, the CLARK Senior Drilling Engine gives extremely long service, due to its smooth, slow motion, rugged construction and perfect lubrication.

Contractors and operators report well after well drilled with a CLARK, practically without upkeep expense. There is no water cost. Fuel cost is low. Drilling time is utilized to the utmost.

The money and time saved by the CLARK Senior Drilling Engine should be investigated by every man who drills oil wells or has them drilled.

Clark Bros. Company, Olean, N.Y. Export Office: 150 Broadway, New York City. Branches and Warehouses: 125 W. First, Tulsa; McCamey and Sweetwater, Texas; Artesia, N.M. California: Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles.

Compressors and Gas Engines

CLARK

WELCOME NEWS TO CABLE TOOL DRILLERS!

The Lone Star Herald

LATE NEWS
Weather
Fair and Warmer

THREE CENTS

MONDAY, JUNE 17, 1929

VOL. 2—NO. 200

MANY OIL OPERATORS SAVING THOUSANDS OF DOLLARS WITH NEW KEROTEST HIGH PRESSURE OIL SAVER

SLEUTH SAVES MAN FROM MOB
Suspect, in Attack On

ACQUIT WOMAN IN MURDER CASE
Jury Frees Mrs. Barr,

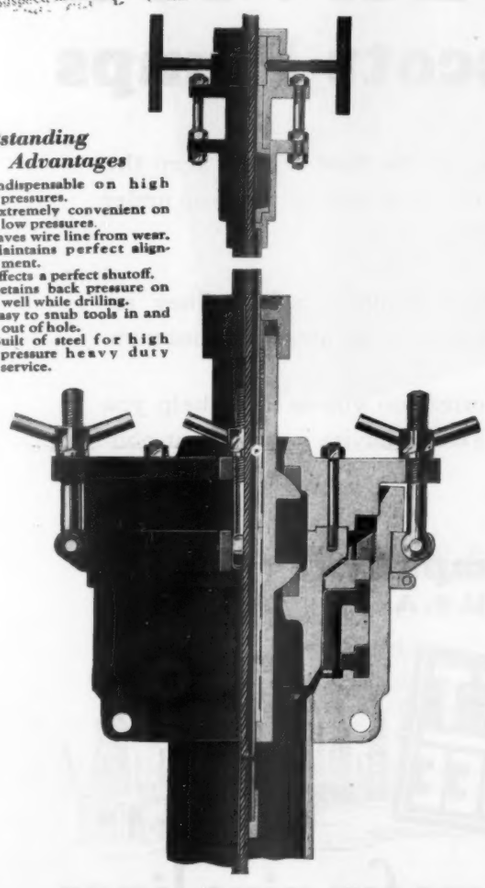
U. S. COMPILES CASUALTY LIST OF PROHIBITION

Demonstrates With Empty Gun, Kills Her Son

THREE KILLED AS WIRE FOULS CANADA PLANE

HEAT CLAIMS THIRD VICTIM
Boy is Drowned In

MEETS A LONG FELT NEED IN CABLE TOOL DRILLING



Outstanding Advantages

1. Indispensable on high pressures.
2. Extremely convenient on low pressures.
3. Saves wire line from wear.
4. Maintains perfect alignment.
5. Effects a perfect shutoff.
6. Retains back pressure on well while drilling.
7. Easy to snub tools in and out of hole.
8. Built of steel for high pressure heavy duty service.

Built Expressly for Drilling Under High Pressure Gas Conditions

THE Kerotest High Pressure Oil Saver is new—nothing else like it—It has been tried, tested and proved to be absolutely dependable under the most difficult pressure conditions—Many cable tool drillers in the West Texas and Canadian Oil Fields have already saved thousands of dollars with this remarkable Kerotest device.

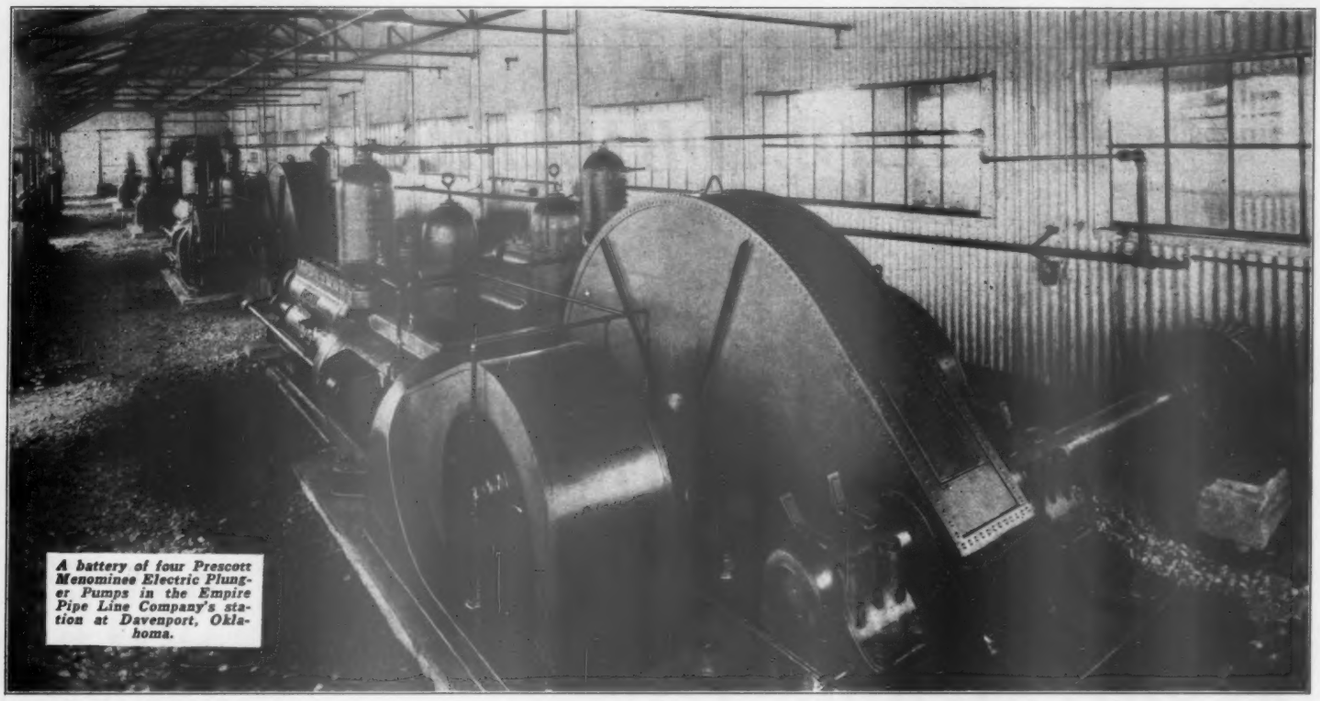
The Kerotest High Pressure Oil Saver consists of a patented ball and socket forged steel swivel mounted in a cast steel main housing. The higher the pressure, the greater force is exerted to maintain a tight seat on the swivel joint. In addition, the swivel joint maintains the cable in perfect alignment at all times thus saving wire line from wear.

The housing is equipped with a specially designed oil resisting packing ring which permits the well pressure to be actuated behind the rubber packing ring. The result is that any increase in the oil or gas pressure automatically produces a greater pressure on the rubber packing ring.

Investigate the Kerotest High Pressure Oil Saver today—You will find it a boon to economical, efficient cable tool drilling. Descriptive literature sent upon request.

KEROTEST

Kerotest Manufacturing Co.
PITTSBURGH, PENNSYLVANIA



A battery of four Prescott Menominee Electric Plunger Pumps in the Empire Pipe Line Company's station at Davenport, Oklahoma.

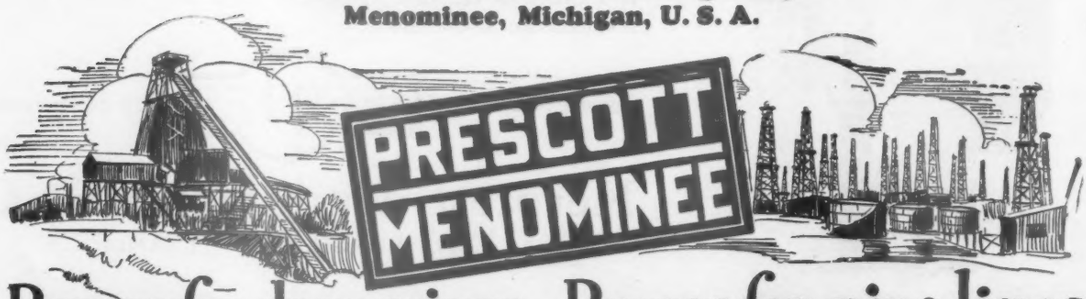
NON-STOP SERVICE
distinguishes Prescott Pumps

PRESCOTT Menominee pumps keep working all the time. They keep the oil moving, day and night, without stopping. They are built to stand up under the most severe service possible in pipe line pumping.

And you can save money, too, with these dependable pumping units. They require less power and maintenance charges are reduced to an absolute minimum.

Send for performance records, catalogs, or any information you need to help you lick your pumping jobs. Our engineers will be glad to advise you without obligation of any kind.

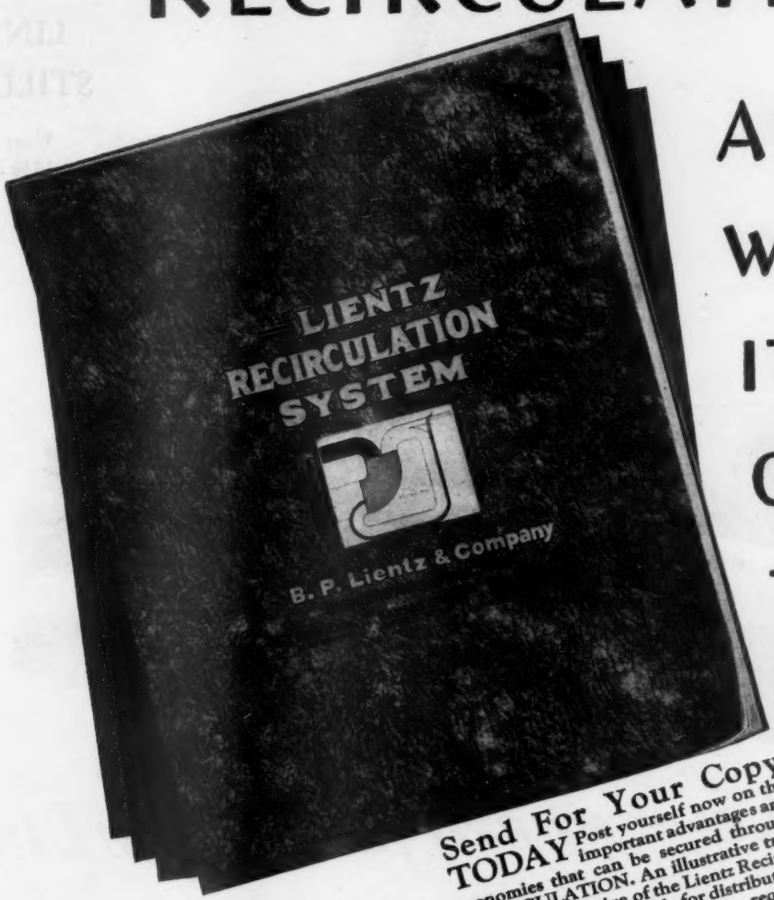
The Prescott Company
Menominee, Michigan, U. S. A.



Pumps for deep mines ~ Pumps for pipe lines

OGJ 8-15-Gray

The Story of RECIRCULATION



AND WHAT IT OFFERS TO YOU!

Send For Your Copy TODAY Post yourself now on the important advantages and economies that can be secured through RECIRCULATION. An illustrative treatise fully descriptive of the Lientz Recirculating System is available for distribution. A copy will be sent you upon request.

B. P. Lientz & Company

ENGINEERS & MANUFACTURERS

Los Angeles Kansas City, Mo. New York

Manufacturers of the Lientz Recirculating System, Lientz Oil Burner, Lientz Gas Burner, American Oil and Gas Furnace and Lientz Fuel Oil Pump Sets.

ETNA

STANDARD

WELDED

CASING
STANDARD PIPE
LARGE O. D. PIPE
LINE PIPE
DRIVE PIPE
DRILL PIPE

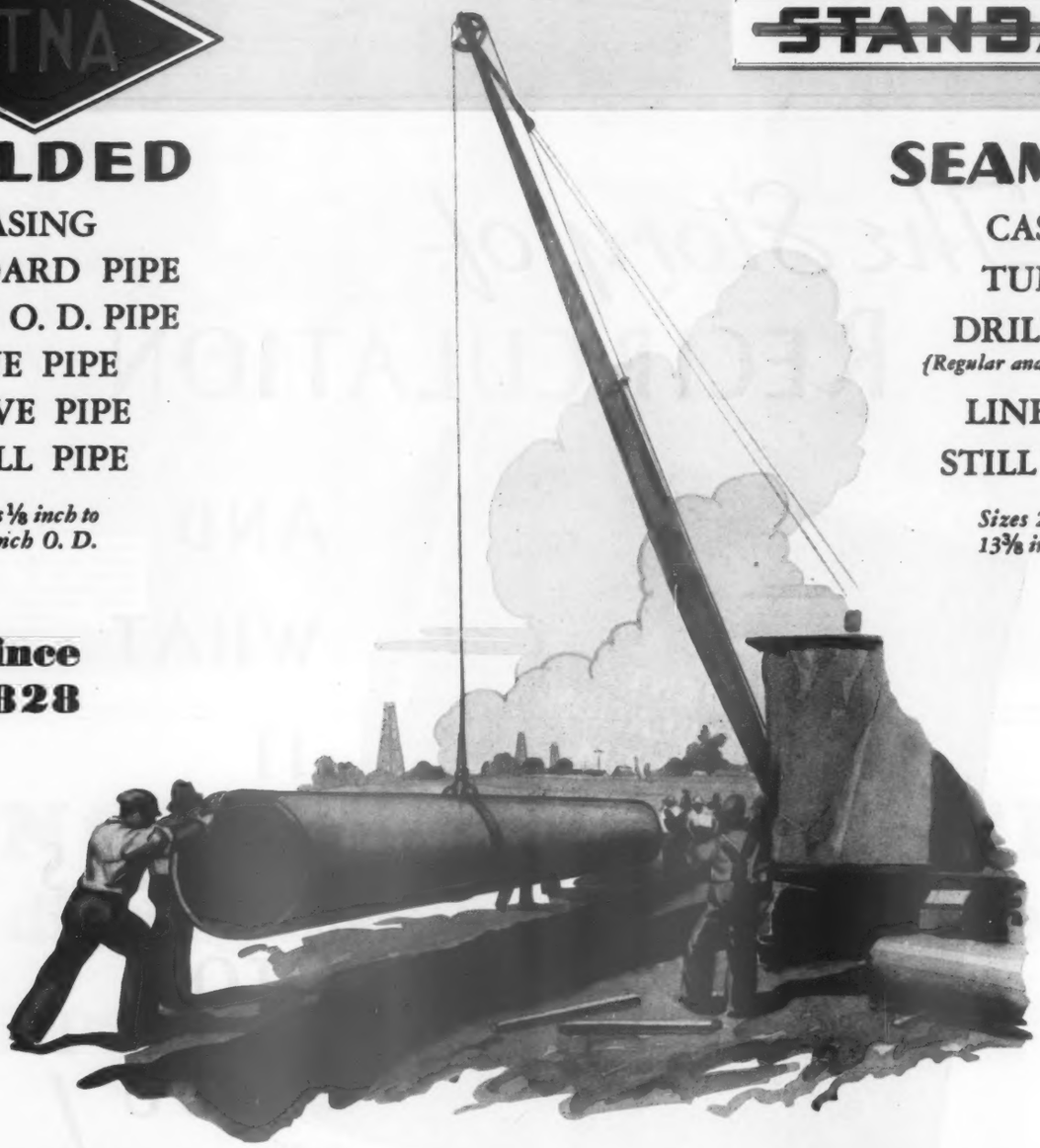
Sizes ⅛ inch to 24 inch O. D.

SEAMLESS

CASING
TUBING
DRILL PIPE
(Regular and Heat Treated)
LINE PIPE
STILL TUBES

Sizes 2 inch to 13⅜ inch O. D.

Since 1828



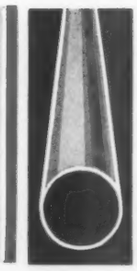
SECURE — *every foot of the Line*

Whether it be for a pipe line or an oil-well, you can place the utmost confidence in these internationally renowned brands of pipe. Every length shipped to the oilfields is rigidly inspected and pressure tested to assure absolute dependability under all field conditions and emergencies.

SPANG, CHALFANT & CO., INC.

General Offices: CLARK BUILDING, PITTSBURGH, PA.

Sales Offices: CHICAGO, ILL. NEW YORK, N. Y. ST. LOUIS, MO. PITTSBURGH, PA. TULSA, OKLA. LOS ANGELES, CAL.
Welded Mills: ETNA, PENNA. SHARPSBURG, PENNA. *Seamless Mills:* AMBRIDGE, PENNA.



STEADY CUSTOMERS

are your best advertisement

-increase yours!

Sell a customer Phillips 66 and he's *your customer* for keeps. He'll go out of his way, if necessary, to do his future buying from you. What's more—he'll tell his friends about your better gasoline. Your list of steady customers will grow and grow. That's because Phillips 66—the superior gasoline of Controlled Volatility—sets a new standard in easy starting, rapid acceleration, mileage, power. Start now to build up big steady business—with Phillips 66. . . . . .

Backed by a tremendous organization engaged in the production of a line of superior motor fuels including "Phillips 66," "Phillips Aviation" and "Phillips Benzo-Gas." The vast experience of the research department of this company is offered to jobbers and refiners on any problem in *controlled volatility*. . . . .

Phillips 66

Phillips Petroleum Company

Bartlesville, Oklahoma

NATURAL GASOLINE FOR CONTROLLED VOLATILITY

POWELL VALVES

IT is unnecessary to recount the virtues of Powell Valves to experienced oil and gas engineers. Years of efficient, dependable performance have established their worth in every class of service.

Demands from the widely scattered oil and gas fields and refineries in all corners of the globe give an international reputation to Powell Valves. For long service, for satisfactory service, specify Powell Valves.

DID you receive your copy of the new Oil Well, Field and Refinery Catalog?

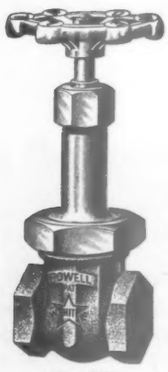


Fig. 375

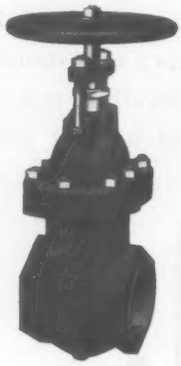


Fig. 1430

Fig. 460

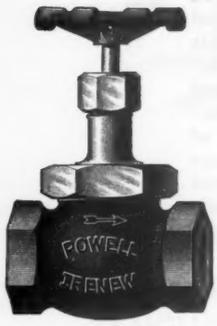


Fig. 190

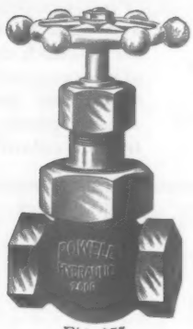


Fig. 175

Carried in Stock and Distributed by

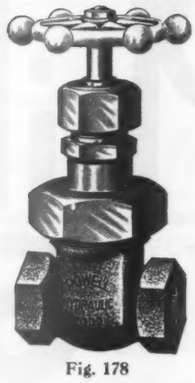


Fig. 178

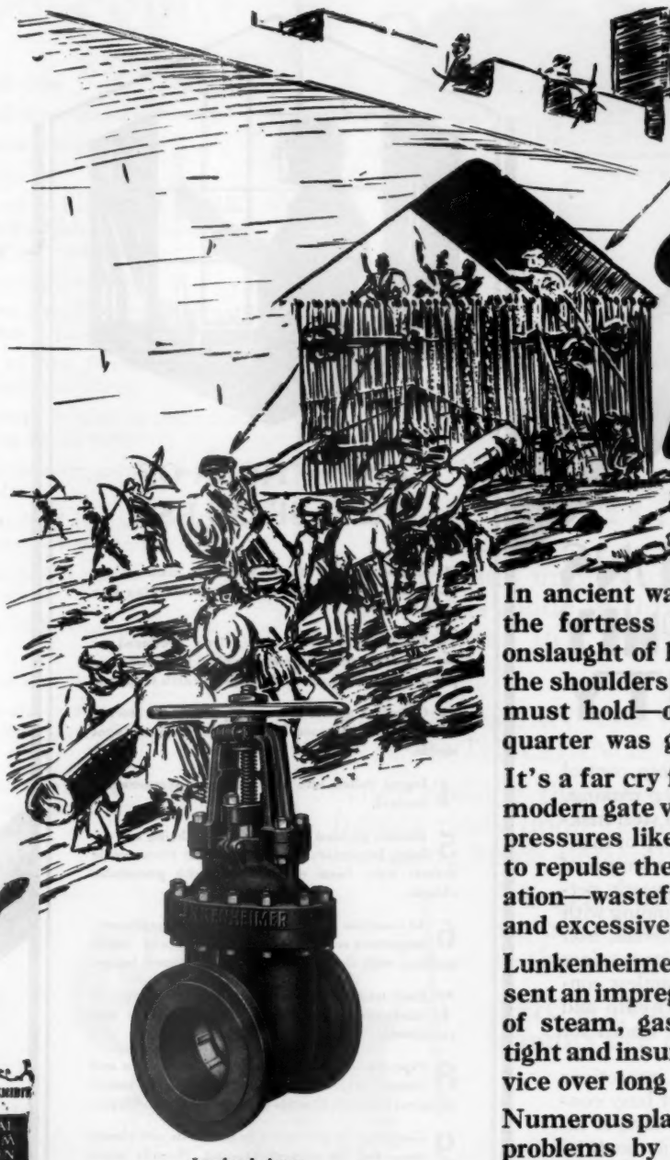
Fig. 4003

Republic Supply Company

GENERAL OFFICES - HOUSTON, TEXAS

OIL AND GAS WELL SUPPLIES

ROTARY AND CABLE TOOLS



The Gate that held!

In ancient war days, the massive gates to the fortress were built to withstand the onslaught of huge battering-rams borne on the shoulders of husky warriors. The gates must hold—once entrance was gained no quarter was given.

It's a far cry from ancient fortress gates to modern gate valves. But present day steam pressures likewise demand sturdy barriers, to repulse the enemies of economical operation—wasteful leakage, time out for repairs and excessive maintenance expense.

Lunkenheimer Iron Body Gate Valves present an impregnable defense against the flow of steam, gas, water, oil, etc. They hold tight and insure continuous satisfactory service over long periods of time.

Numerous plants have solved their gate valve problems by installing "Lunkenheimer". The wide range of patterns and sizes offers an economical standardization plan for any service where valves of this type are adaptable.

Lunkenheimer
Iron Body Bronze Mounted Gate Valves

Standard	125 lb. W. S. P.,	2 to 24 in.
Heavy	175 lb. W. S. P.,	2 to 12 in.
Extra Heavy	250 lb. W. S. P.,	1½ to 18 in.

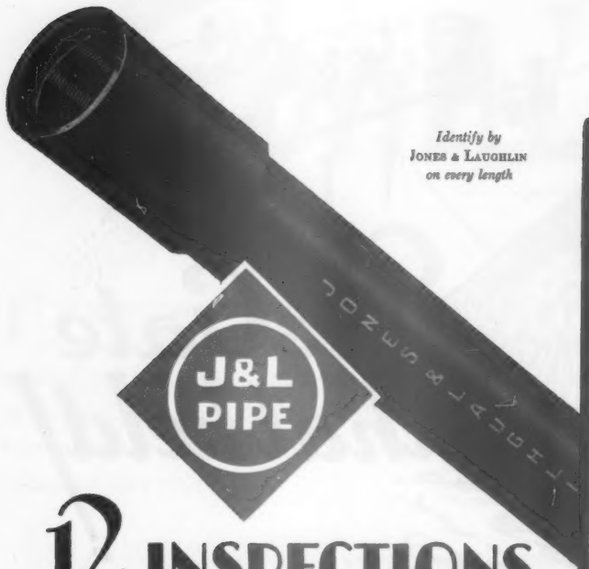
Also procurable in All-Iron Pattern for handling solutions which attack bronze, and with lever for Quick Operating purposes.

Lunkenheimer Iron Body Gate Valves are illustrated and described in Gate Valve Book No. 511. A copy can be had upon request—either from The Lunkenheimer Distributor in your locality or by writing direct.

THE LUNKENHEIMER CO.
"QUALITY"
CINCINNATI, OHIO, U. S. A.
NEW YORK CHICAGO BOSTON PHILADELPHIA
PITTSBURGH SAN FRANCISCO LONDON
EXPORT DEPT 318-322 HUDSON ST., NEW YORK

LUNKENHEIMER VALVES

6-58-91



Identify by
JONES & LAUGHLIN
on every length

12 INSPECTIONS INSURE UNIFORMLY HIGH QUALITY

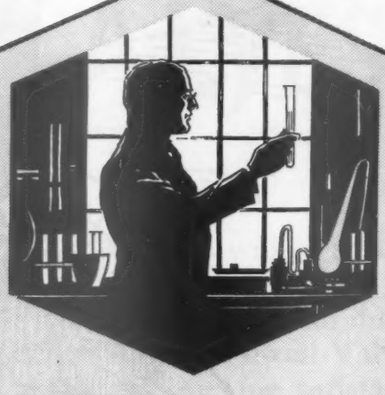
J & L's adequate resources, ownership control of each process from ore mining to pipe making, nearly 80 years of experience in iron and steel making, and rigid inspection through each step of manufacture, are your guarantees that every length of J & L Seamless Casing you order is as nearly perfect as seamless casing can be made. Beginning with chemical and physical tests of raw materials, iron ore, coke and limestone (from J & L's own mines and quarries), inspection on J & L Seamless continues without interruption until the twelfth and final checking is made as the pipe is loaded for shipment.

In addition to the twelve tests and inspections (listed at right) a milling machine is kept busy constantly machining out samples for pull tests to insure tensile strength safely within requirements of the trade. Drillings are also taken during mill operations to be analyzed for chemical composition, and samples are microphotographed frequently to check grain structure.

Oil men declare: "There's no better Seamless made than J & L."

JONES & LAUGHLIN STEEL CORPORATION

Jones & Laughlin Building
PITTSBURGH - - PENNSYLVANIA



INSPECTIONS OF J & L SEAMLESS

1 Chemical tests of raw materials made at the mines and quarries, also before charging into blast furnaces.

2 Thorough analysis of pig iron produced by blast furnaces and metallurgical inspections as pig iron is made into steel in open hearth furnaces.

3 Chemical analysis for composition as steel is poured from open hearth furnaces into ingot molds.

4 Ingots rolled into blooms under temperature control.

5 Blooms pickled in strong acid to bring out defects. Inspectors pass blooms only after visible defects have been chipped out with pneumatic chisels.

6 As seamless tubes come from the straightener, inspectors scrutinize both outside and inside surfaces with the aid of specially designed lamps.

7 Ends trimmed; then pipe is inspected for wall thickness and correct outside diameter and roundness.

8 Pipe threads checked with certified gages and second inspection made for flaws, to insure clean cut accurate threads of proper pitch and taper.

9 Couplings as produced in our mills are closely inspected for correct tapping, threads accurately gaged for pitch and taper and checked on specially designed machines for alignment.

10 All items of previous inspections rechecked on testing benches, and stencil marks applied.

11 Each length given hydrostatic pressure test before rust-resisting coating is applied and pipe is delivered to shipping platform.

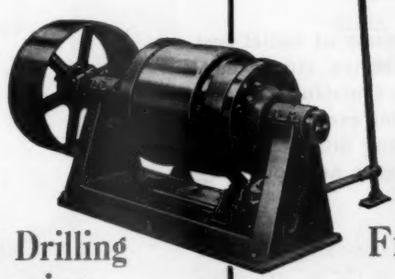
12 Final inspection of each length as it is loaded for shipment.

J&L STEEL

Franklin Valveless Oil and Gas Engines

Some of the Franklin OF Good Points

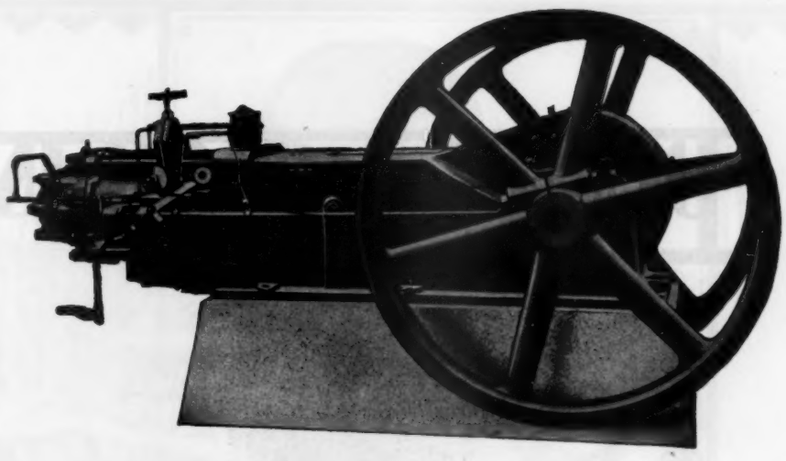
- Enclosed type
- Low fuel consumption
- 100% interchangeability
- Simplicity
- Piston rod is fitted with metallic packing which never needs adjusting or replacing
- Every spring exposed
- Complete simplicity with practically no adjustment
- In case of belt breakage engine automatically stops
- Fuel pump driven by eccentric running in oil bath
- Bearings are removable and reversible
- Only standard threads used. No special wrenches required
- Cylinder has 3 point, force feed lubrication
- Balance of lubrication is splash feed
- Pistons are air cooled
- All nuts subject to vibration are castillated and fastened with cotter pins
- Most economical to operate in fuel, lubricant, water and repairs
- Easy to start



Type BG Clutch for Cable Tool Drilling or Pumping

- A vast improvement over the former type of clutches.
- Driven from pulley on engine. Permits the use of a larger diameter pulley and makes possible a slower clutch speed. Operates by hand lever on derrick.
- Construction and design prevent Reverse Clutch Troubles.

PRICE—$1200.00 F.O.B. Franklin, Penna.



Here Is Practical Standardization

The new and improved Franklin Oil Engine, identified as type OF is made in three sizes: 12x16 (40 HP) and 13x16 (50 HP) and 16 x 16 (80 HP) for drilling, pumping and power.

ALL FRANKLIN VALVELESS 16″ STROKE ENGINES ARE INTERCHANGEABLE ON THE SAME BLOCK

After drilling the well, the operator can install one of the lighter units upon removal of the drilling engine. It fits the same block perfectly.

It is to the operator's interest to see that his drilling contractors use the Franklin since by doing so the cost of a new engine base is eliminated.

Here is practical standardization in which the benefits are mutual.

Send for literature.

Franklin Valveless Engine Company
Franklin, Penna.

PRICES

12 x 16 Type OF Franklin, including water circulating pump and pulley. *$1550 F.O.B. Franklin*

13 x 16 Type OF Franklin, including water circulating pump and pulley. *$2050 F.O.B. Franklin*

16 x 16 Type OF Franklin, including water circulating pump, pulley and air starting equipment. *$3200 F.O.B. Franklin*

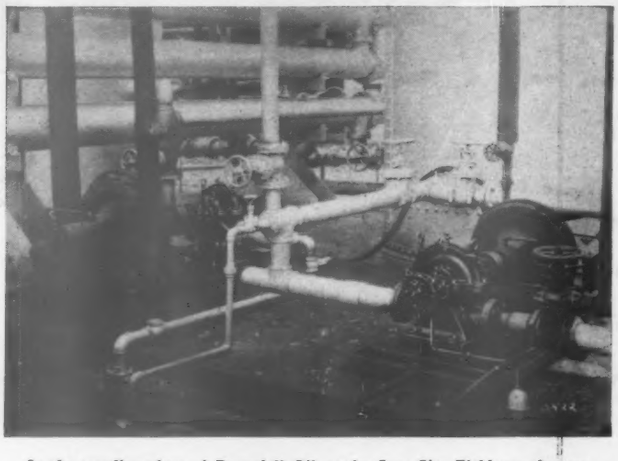
NOTE—Type OF is readily converted into type OG for gas fuelization.

Distributed by

OIL WELL SUPPLY COMPANY

Branches in All Oil Fields

PUMPS For The OIL INDUSTRY



In the gasoline plant of Barnsdall Oil at the Carr City Field are the two Goulds Ball Bearing Single-Stage, Double Suction Centrifugal Pumps as shown above. Elsewhere throughout the plant are others, rendering efficient, dependable service.

Goulds Pumps Are Dependable

ALMOST as a matter of course, oil operators who want trouble-free pump performance specify Goulds. The name stands for proved dependability throughout the oil fields of the world.

Goulds Pumps are known for economy of initial cost and upkeep, for long trouble-free service, sturdy construction and all that is modern in centrifugal pump-practice. There is a Goulds pump for every purpose—for booster service, draining, pumping oils, water and distillates. May we serve you on that next pumping proposition?

Let us send you Bulletins 126 and 130—studies of the performance of centrifugal pumps in the oil industry—prepared by Prof. R. L. Daugherty. You will find them interesting.

GOULDS PUMPS, Inc., Seneca Falls, N. Y.

Houston
1902 Second National Bank Bldg.

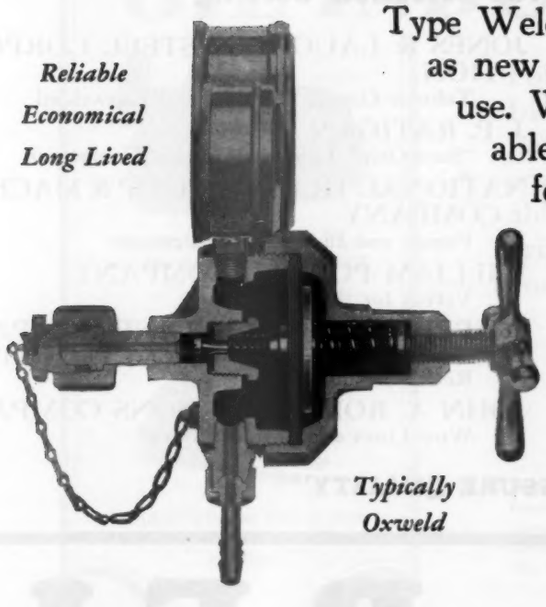
Tulsa
705 Kennedy Bldg.

GOULDS PUMPS

Will $3.60 buy a new Oxygen Regulator?

No! *But* $3.60 will make an Oxweld Stem Type Welding and Cutting Regulator as good as new—even after it has had years of hard use. Why? Because simplicity of design enables you to buy the whole "inside works" for $3.60!

Reliable
Economical
Long Lived



Typically Oxweld

Oxweld Regulators are built to last. Rugged—no delicate mechanism—plenty of the right material in the right place. Design permits gas flow in any desired quantity. Uniformly dependable for accurate and steady reduction of pressure from cylinder to blowpipe on every type of oxy-acetylene welding and cutting work.

OXWELD

WELDING AND CUTTING APPARATUS AND SUPPLIES

OXWELD ACETYLENE COMPANY

Unit of Union Carbide and Carbon Corporation

UCC

NEW YORK
Carbide and Carbon Bldg.

CHICAGO
Carbide and Carbon Bldg.

SAN FRANCISCO: Adam Grant Building

MR. H. D. STRONG
Store Manager
at
Oklahoma City

FRICK-REID'S
NEW STORE AT
OKLAHOMA CITY

—was completed August 1st, and is now actively serving the Petroleum Industry in this rapidly expanding area. The new Store is located in the 500 block on "G" Street, about 3 miles southeast of the main business section of the City.

This new store, like all Frick-Reid establishments, is prepared to furnish QUALITY PRODUCTS by the manufacturers listed below, and a complete line of dependable oil country supplies. Let this new Frick-Reid supply base add to the economy and efficiency of your operations.

ROSSENDALE-REDDAWAY CO.

"Camel Hair" and canvas stitched belting

WALWORTH COMPANY
Fittings and Valves for all branches of the Oil Industry

WHITLOCK CORDAGE COMPANY
Manila Cordage, including Drilling Cables, Bull Ropes, Cat Lines, etc.

AXELSON MACHINE COMPANY
Sucker Rods, Pull Rods, Working Barrels, etc.

DONOVAN BOILER WORKS
Oil Country Boilers and Tanks

BEAUMONT IRON WORKS COMPANY
Dreadnaught Rotary Drilling and Pumping Equipment

FRICK-REID SERVICE RUBBER BELTING
Our Own Specifications

JONES & LAUGHLIN STEEL CORPORATION
Tubular Goods, Seamless and Lapwelded

J. P. RATIGAN
"Sure-Grip" Line of Pumping Equipment

NATIONAL TRANSIT PUMP & MACHINE COMPANY
Pumps and Pipe Line Equipment

WILLIAM POWELL COMPANY.
Valves for the Oil Industry

JOSEPH REID GAS ENGINE COMPANY
Two and Four Cycle Gas Engines, Pumping Powers, Refinery Equipment

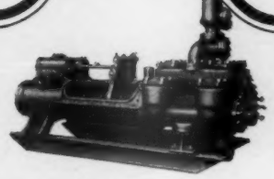
JOHN A. ROEBLING'S SONS COMPANY
Wire Lines and Welding Wire

"SOURCES THAT ASSURE QUALITY"

FRICK-REID
SUPPLY CORPORATION

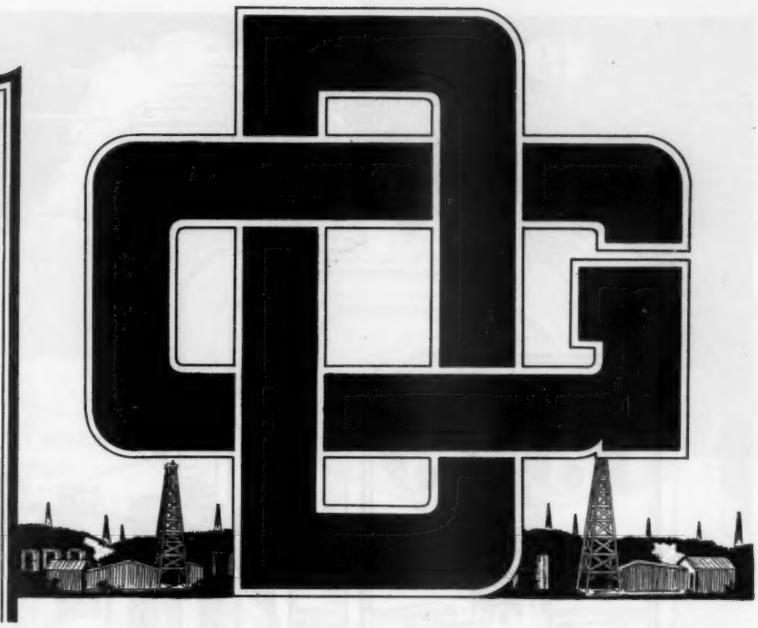
COVERS THE FIELD WITH WELL MANAGED STORES FROM THE ROCKY MOUNTAINS TO THE ATLANTIC COAST

Pittsburgh ..... Tulsa



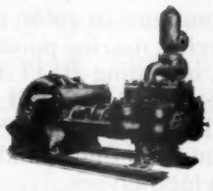
Divided Cylinder Steam Booster Pump for slush and oil line service—14½x7¼x20

Enclosed, self-lubricated, Duplex Power Pump, Packed Piston Type—5x10 and smaller.



A *complete* LINE OF OIL INDUSTRY PUMPS

Flood-Lubricated, Power Driven Booster—4x12, 4½x12, 5x12 and 5½x12



Divided Cylinder Power Driven Booster Pump, 7¼x14 and smaller.

For every pumping need of the Oil Industry, there is a GARDNER-DENVER pump of suitable size and style, and equipped to use the type of power available. Send us your requirements. Descriptive bulletins will be forwarded at your request.

GARDNER-DENVER COMPANY
QUINCY, ILL.

Factory Branches in All Oil Fields

OIL COUNTRY DISTRIBUTORS

Atlas Supply Co. . . . . Muskogee, Tulsa and Fort Worth
Emsco Derrick and Equipment Co. . . . . Los Angeles and Tulsa
International Supply Co. . Stores in All Principal Mid-Continent Fields
Haywood-Williamson . . . . . Shreveport and El Dorado
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The Republic Supply Co. of California . . . . Stores in All Principal California Oil Fields

GARDNER-DENVER

Covering . . .

a Greater paint field every year

There is no standing still in the modern paint factory. To keep abreast of the demand for new uses, new finishes, and greater service, Hill, Hubbell & Company maintains a completely equipped laboratory where new formulae are constantly being developed, checked and tested for specific paint needs.

For more than twenty years the Lighthouse trademark has identified the products of Hill, Hubbell & Company in color paints, for interior and exterior, marine paints, and protective surfaces, including BITURINE PIPE COATINGS, L&S PORTLAND CEMENT PAINT, BITULUMIN, the permanent aluminum paint finish, and other equally superior surface savers.

HILL, HUBBELL & COMPANY

Division
General Paint Corporation
Manufacturers of Highest Grade Oil Industry Paints and Pipe Line Coatings
General Offices: SAN FRANCISCO *Mid-Continent Factory:* TULSA

Offices:
SAN FRANCISCO - TULSA - NEW YORK - CHICAGO - LOS ANGELES - HOUSTON - PORTLAND - SEATTLE - DALLAS

The O. C. S. No. 85 E Universal Rig Front with chain driven sand reel, equipped for electric power. Timken Bearings used in jackpost boxes, sand reel and speed reduction unit.

O.C.S. Universal Rig Fronts Are 100% Timken Equipped

This liberal use of Timken Bearings is typical of the care and thoroughness exercised by the Oil Specialties Mfg. Co., Coffeyville, Kansas, in the design and construction of their equipment.

As in all types of oil field machinery, they find in Timken *the one bearing that does all things well* . . . whether the loads are all *radial* . . . all *thrust* . . . *or a combination of both.*

Thus, besides the considerable power savings effected through friction elimination, Timken Bearings contribute a substantial endurance factor to O. C. S. rig fronts and chain driven sand reels, as a result of which maintenance costs are materially lowered, and time saved by the curtailment of shutdowns for repairs or replacements.

And guarding Timken benefits against all destructive influences is the exclusive combination of Timken tapered construction . . . Timken *POSITIVELY ALIGNED ROLLS* . . . and Timken steel.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

HAYSTELLITE is unique among diamond substitutes. It combines the qualities of hardness, toughness, and strength and withstands welding temperatures without cracking.

. . . . In hardness it ranks between carborundum and diamond on the mineralogical scale.

. . . . It is tougher and stronger than any other diamond substitute. It is not broken away and wasted in use.

. . . . It is furnished in pieces of regular and uniform size.

. . . . It can be tied in without becoming cracked by welding temperature. Sudden heating does not check it.

. . . . It is easy to reclaim. Its melting point is twice as high as that of steel, approximately 4500 degrees Fahrenheit.

The use of Haystellite, hard faced with Haynes Stellite, gives an oil well drilling tool unequalled for speed and economy in drilling.

HAYNES STELLITE COMPANY

Unit of Union Carbide UCC *and Carbon Corporation*

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HAYSTELLITE
HASCROME
HASTELLOY

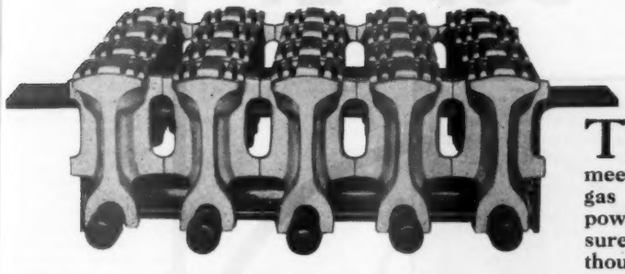
Quality Products
Fair Prices
Engineering Service
Dependable Supply

LOW PRESSURE *Industrial and* Oil Field *gas burners*

GIVING UNUSUAL HIGH EFFICIENCY AND *fuel economy*

DONNER

Low Pressure Gas Burner
for Oil Field Boilers



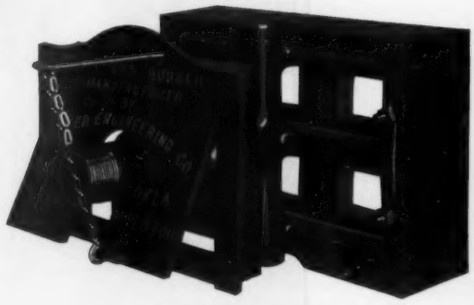
THIS burner is a modified Bunsen type with several added features which makes it superior to others of similar design. Provision is made for secondary air; the top is curved to prevent scale and rust accumulating on it; a minimum amount of material is used, yet it is sufficiently strong to withstand rough handling; the mixer tube is designed with bell-shaped opening, and the ports are of such size and shape as to prevent backfiring.

With the top designed so as to break and spread the mixture of air and gas, a short flame of bluish color is produced. This insures complete combustion before the burnt gases come in contact with the heat absorbing surface. The flame produced has a relatively high temperature. With the grate area sufficiently covered to take care of the load on low pressure gas, a uniformly intense convection current is produced which does not cause any overheating at some point, consequently tube and seam trouble is reduced to a minimum.

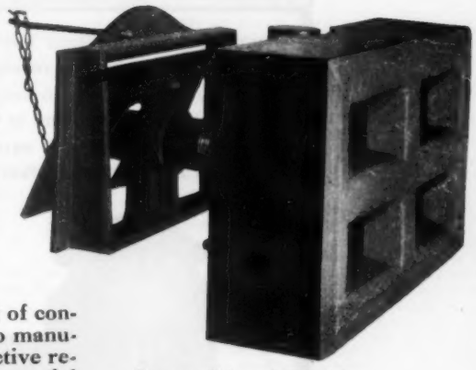
The gas manifold is made of ¾″ pipe welded on a 2″ header. The ends of ¾″ pipe are closed with caps which may be removed and manifold thoroughly cleaned when necessary. The jet size and mixer tube are of such design that, with a slight draft in the fire-box, the correct proportion of air and gas is maintained through a wide range of pressure. The momentum of gas issuing from the jet automatically injects the proper amount of air, and with the damper set for average load conditions, good combustion is assured at all times.

WENDT

Low Pressure Gas Burner
for Power and Heating Purposes



Front and Side View



Furnace Side and Side View

THE Wendt low pressure gas burner has been designed to meet the requirements of natural gas consumers for heating and power purpose where low pressure gas only is available. Although the burner will operate on several pounds of pressure, if sufficient draft is available, it is more satisfactory to operate on a few ounces.

This burner is made up into units of 25 H.P. each. That is, each unit will develop 25 H.P. on 2 oz. gas pressure at the burner. It will develop considerable overload if more gas pressure is available, but on all low pressure installations, enough burners should be installed to carry the load on 2 ounces. The overload is then taken care of by the excess pressure available.

Wendt and Donner low pressure gas burners are the perfected result of constant research and experimenting to manufacture burners to meet their respective requirements, giving unusually successful performance and high efficiency.

Hundreds of satisfied customers recommend these burners. Clip the coupon and mail to us, with the information requested about YOUR Boilers. We will be pleased to assist you in the selection of the correct size and type burner to meet your particular requirements.

We have an interesting sales plan to offer distributors of Wendt and Donner burners, write us to-day about your territory.

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TULSA, OKLAHOMA

Branch Office 108 E. Seminole St. Seminole, Okla. Phone 252

TEAR OFF AND MAIL

Name.....
Address.....
Make of Boiler.....
Number of Boilers.....
H.P......
Type.....
Kind of fuel used.....

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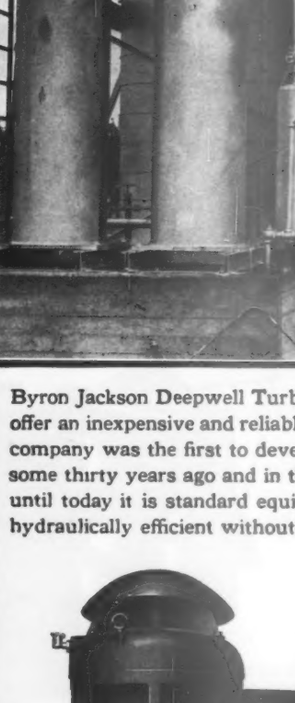
Byron Jackson Deepwell Turbine Pumps installed in bored wells offer an inexpensive and reliable water supply for industries. This company was the first to develop the deepwell turbine principle some thirty years ago and in the intervening years this pump has been improved and refined until today it is standard equipment with many large pump users. The pumping element is hydraulically efficient without sacrificing strength and ruggedness. The drive shaft is totally enclosed from top to bottom and oil lubricated where it operates in bronze bearings spaced six feet apart. Strongly and simply constructed, the discharge head has the driving motor built in as an integral part. Thrust bearing and adjusting nut are on top of motor, readily accessible. Fine materials and careful workmanship, together with time-tested design, insure years of efficient, trouble-free operation. In addition to Deepwell Turbine Pumps, this company manufactures a complete line of centrifugal pumps for every service. Write or call the nearest branch for information about pumps to meet your requirements.



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PRODUCING REFINING ENGINEERING MARKETING

VOL. 28. NO. 13. TULSA, OKLAHOMA, AUGUST 15, 1929

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Production Curve Continues Upward

Highest daily average estimated total production in 1928, week ended Dec. 29, 2,585,844 bbls. Lowest in 1928, May 19, 2,338,241 bbls.

Santa Fe Springs, California, and Gray County, Texas, Mainly Responsible for Increase of 19,525 Bbls. per Day

By James McIntyre

Highest daily average estimated light oil production in 1928, week ended Dec. 29, 2,158,134 bbls. Lowest in 1928, Mar. 3, 1,927,713 bbls.

With Texas producing an average of 897,289 barrels; California, 861,500 barrels; and Oklahoma, 723,670 barrels, a new peak in daily production was reached in the past week with a total of 2,933,781 barrels per day, which is at the rate of 1,070,830,065 barrels per year.

It is interesting to note that since the middle of June the United States has been producing on a billion-barrel-per-year basis, which is all the more significant when it is recalled that it took over 41 years, or from 1859 to early in the twentieth century, to produce the first billion barrels of oil in the United States.

Last week's increase came from California and the Texas Panhandle, mainly. Santa Fe Springs, California, alone produced 275,000 barrels a day, a 10,000-barrel increase over the week before, and Gray County was responsible for the 14,892-barrel increase in the Texas Panhandle.

The production of the past week was 535,955 barrels per day in excess of the production a year previously, and 375,427 barrels more than the daily production two years ago when Seminole was hitting on high.

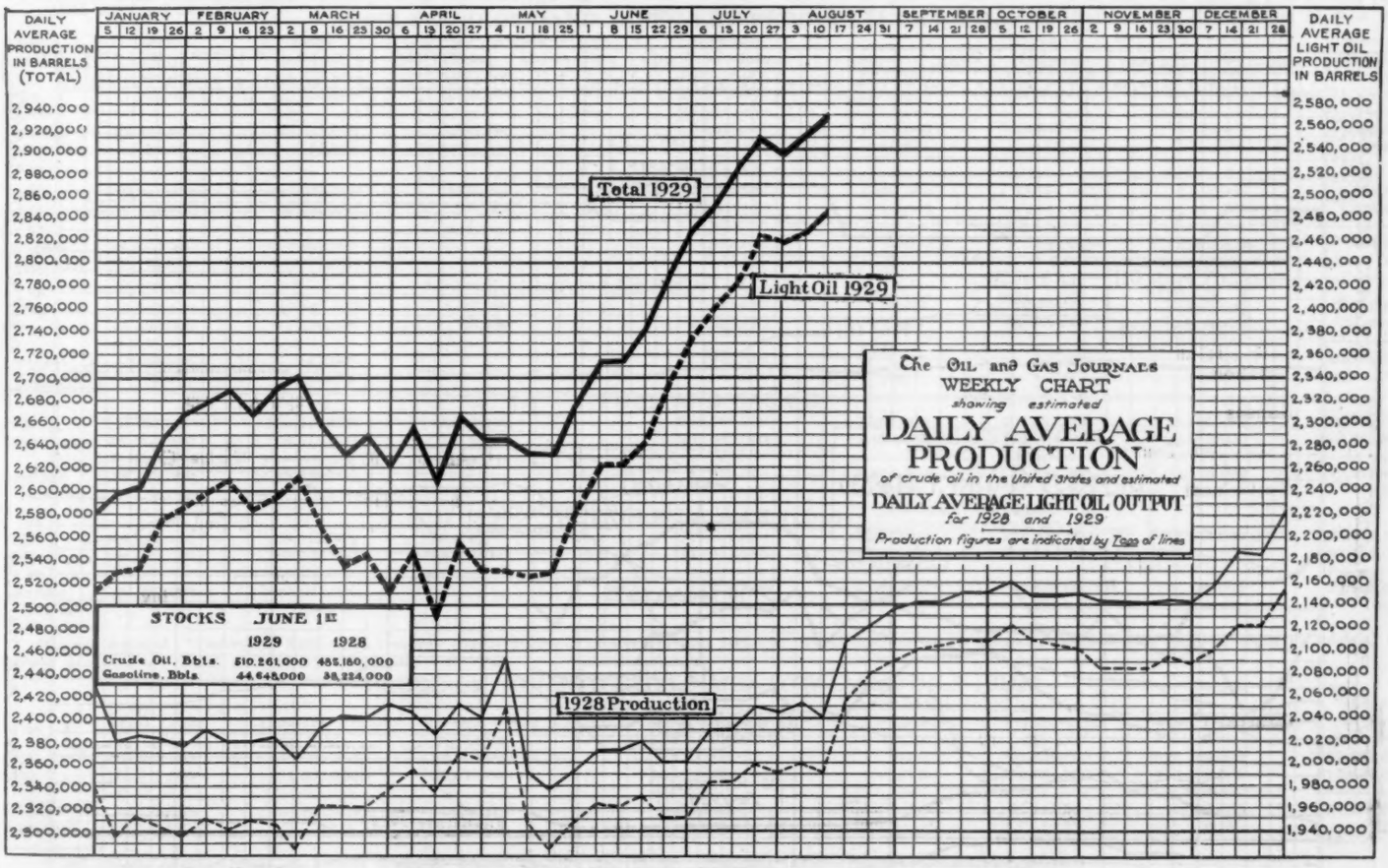
Earlier in the summer the big demand for crude was centered in the "sweet crude" fields of the Mid-Continent. Recently this has changed and the demand shifted to the West Texas area, where the big companies with pipe line connections have been buying all the crude oil in sight, as produced and out of stocks. This shift has puzzled petroleum economists some of whom attribute it to a desire on the part of the large major companies to be in readiness to meet a large foreign demand next year. West Texas production which is hovering around 400,000 barrels a day is yet below pipe line capacity and also considerably below the potential output of the territory. It, together with the cheap South American oils, is keeping California oil off the Atlantic Coast and making it necessary for California oil companies to consider plans for more storage facilities on the Pacific Coast to handle the large excess crude production.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended August 10, and a comparison with the previous week follows:

	August 10		August 3	
	Light	Heavy	Light	Heavy
Oklahoma—				
Oklahoma City	32,910	.....	30,485	.....
St. Louis-Pearson	71,525	.....	73,915	.....
Seminole	298,975	.....	301,970	.....
Northern Miscellaneous	264,260	.....	267,210	.....
Southern Fields	56,000	.....	56,050	.....
Total Oklahoma	723,670	.....	729,630	.....
West Texas—				
Hendricks	140,585	.....	140,531	.....
Yates	140,035	.....	141,060	.....
Remainder	116,860	.....	118,054	.....
Total West Texas	397,480	.....	399,645	.....
North Louisiana	29,605	6,400	29,295	6,415
Arkansas	20,980	46,335	21,030	46,780
North Central Texas	152,776	.....	150,226	.....
Texas Panhandle	113,643	.....	98,751	.....
East Central Texas	18,047	.....	19,719	.....
Kansas	126,985	.....	126,415	.....
Total Mid-Continent Area	1,583,186	52,735	1,574,711	53,195
Gulf Coast	.....	159,946	.....	156,430
Southwest Texas	.....	76,503	.....	76,976
Eastern	125,000	.....	124,000	.....
Rocky Mountain Area	74,911	.....	73,944	.....
California—				
Santa Fe Springs	275,000	.....	265,000	.....
Long Beach	170,000	.....	169,500	.....
Huntington Beach	41,500	.....	41,500	.....
Elwood	25,000	.....	27,500	.....
Ventura Avenue	56,500	.....	57,000	.....
Seal Beach	47,000	.....	48,000	.....
Remainder of State	91,500	155,000	88,500	158,000
Total California	706,500	155,000	697,000	158,000
Total United States	2,489,597	444,184	2,469,655	444,601
Grand Total		2,933,781		2,914,256

→ **Total Increase, 19,525 Bbls.; Light Oil Increase, 19,942 Bbls.** ←



Refiners Advance Motor Fuel Prices

Quotations Higher on U. S. Motor Grade. Gas Oils and Distillate Strong. Large Orders for Natural Gasoline

By C. O. Willson

An advance in tank car gasoline prices by several refiners who early in the month had reduced their prices substantially and continued strength in the better grades of gas oil, distillate and high gravity fuel oils were the outstanding developments in the Oklahoma (Group 3) market during the past week.

Natural gasolines also reacted favorably with the purchase of several hundred cars for movement to the Gulf Coast and prices the first of the week were stronger than they were earlier in the month. Kerosenes are holding their own with an undertone of strength which may result in higher prices later in the month. With practically no stocks on hand except at one refinery, bright stocks continue strong. Wax prices are unchanged with some of the larger manufacturers refusing spot or future business at present quotations. Other products are unchanged.

The situation in the refinery gasoline market is somewhat unique. The first of the month several of the larger refiners in the State who had been quoting 8 cents to the trade for U. S. Motor grade, greatly to the surprise of the buyers generally, reduced their price to 7¼ cents. A few refiners either did not make any price change or reduced their prices only one-quarter or one-half cent. This reduction, however, last week established a general market of 7 to 7¼ cents, the lower price being quoted by refiners who have been underquoting the market as established by the larger refiners in the State.

The latter part of last week several of the refiners who had been quoting 7¼ cents advanced to 7½ cents and on Monday a price of 7¾ cents was established in sales to the trade. It was predicted that the price would be advanced to 8 cents before the end of the week, thus returning to the price effective the latter part of July.

It was too early on Tuesday to determine what the result of this attempt to bolster the spot market would be. In the opinion of many of the trade it would have been less difficult to have maintained the price the first of the month than it will be to advance it after a decline.

REFINED MARKET BAROMETER

Practically the only strength shown in the refinery gasoline situation over the past week was the effort being made in the Mid-Continent and Middle West to advance prices for domestic shipment. Prices were advanced from one-fourth to one-half cent by several large refiners in those areas. In the remaining areas the reports uniformly indicated weakness despite the heavy consumer demand. On the West Coast prices for domestic movement are still fairly well maintained although price concessions have been necessary recently in shipments to the East Coast. The gasoline export movement is slow, due in part to the fact that posted prices are now higher than the prevailing domestic market at most points. Reports on the kerosene market were generally favorable for the week with the furnace oil demand for the coming season getting under way. Natural gasoline prices were firm. The only weakness in the fuel oil market was reported on the Gulf Coast. Gas oils were unchanged. Lubricants continue reactionary in the East with no change in the Mid-Continent market. Petroleum wax unchanged.

Mid-Continent—Refinery gasoline prices for domestic movement advanced by a number of refiners in all areas. Natural gasolines also generally stronger due to improved demand. Kerosene prices higher in Louisiana and Arkansas with no changes in other areas. Fuel oil prices steady. Gas oil higher in Oklahoma and Kansas. Distillate in good demand and prices higher. Lubricants unchanged.

East Coast—Further stiffening in gasoline market. Kerosene in fair demand and prices steady. Fuel oil prices unchanged. Heavy movement of Diesel oil. Lubricating oils fairly steady except cylinder stocks, which are lower in price with several refiners refusing to accept business at present prices. More inquiries for paraffin wax with no change in prices.

Pennsylvania—Several grades of refinery gasoline reduced. Kerosene steady. No change in fuel oil. Higher viscosity neutral oils and steam refined stocks lower in price. Bright stocks unchanged.

Chicago—More active spot demand for gasoline and prices advanced by a number of sellers. Kerosene quiet. Distillate and zero gas oil strong. Industrial fuel oil market active. No change in other products.

Gulf Coast—Fuel oil market weakens with lower tanker rates. Gasoline market lower. Neutrals unchanged.

California—Gasoline prices unchanged with weak undertone.

On the other hand, the trade is unquestionably in the midst of the heaviest demand of the year. Refiners with their own retail outlets invariably report that the August station consumption is substantially greater than in July. The same situation is indicated in the increased contract shipments to jobbers. A few refiners in Oklahoma due to the heavy requirements of their stations or their jobber contracts will have practically no material to offer on the spot market. Due to this situation it appears certain that a few refiners at least will maintain the price advances of the past week even though they obtain very little spot business.

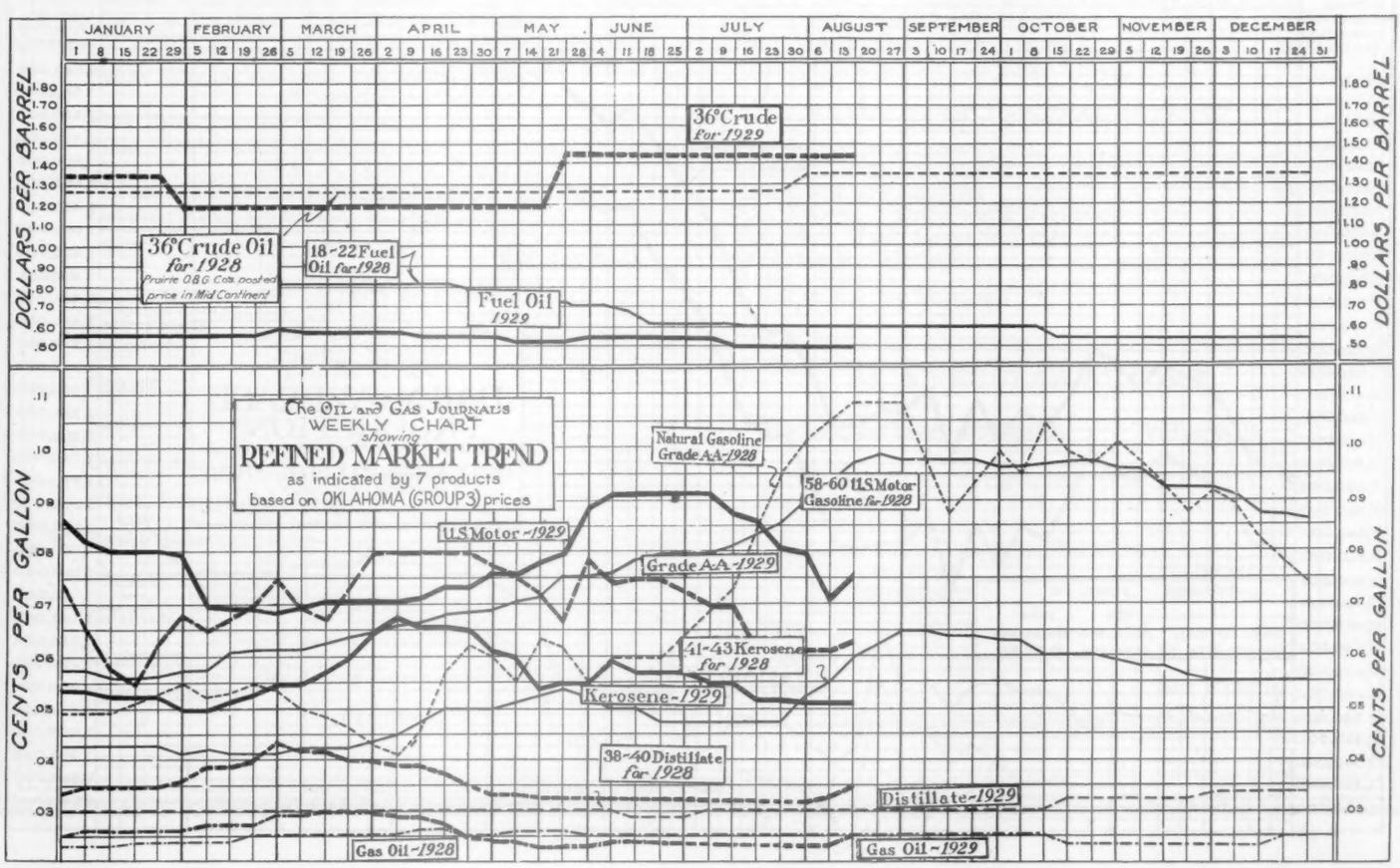
The advance in prices by the larger refiners aided the smaller refiners who last week were quoting 7 cents for the U. S. Motor grade with an occasional sale under that figure. A price of 7¼ cents appeared to be the low of the market for specification material on Tuesday.

Government Report

In the accompanying table the Bureau of Mines Report covering Mid-Continent crude oil runs to stills, gasoline production and gasoline stocks, is summarized by areas for May and June of this year and June of last year. Elsewhere in this issue similar data for other areas based on government reports will be found.

The latest report of the Government covering June operations shows the same general trend in Mid-Continent operations as was apparent in previous reports. Mid-Continent refiners as a unit have not increased their crude oil runs to stills and their gasoline production as much as some of the other refining areas. The increase in crude runs to stills for the first six months in the Mid-Continent

(Continued on Page 152)



Excess Oil Confined to California

Government Report for June Shows Small Decline in Crude Stocks East of West Coast. Gasoline Demand Heavy

By C. O. Willson

The overproduction of crude oil so far as the current relationship between supply and demand was confined to California, according to the latest report of the Bureau of Mines covering the June operations of the oil industry, including a summary for the first six months of this year.

As has been the case each month for the first half year additions were made to the crude oil inventories of the industry during June, the quantity for the month totaling 3,763,000 bbls. Unlike the situation in previous months, all of this increase can be accounted for by the excess supply in California. In fact for the area east of the West Coast crude oil stocks for the first time this year, were reduced 453,000 bbls. Additions to storage were made in some of the oil-producing sections but for the entire area the demand exceeded a production which was greater than it was in May. These data are based on the government's new method of figuring stocks.

A study of the June data as reported by the Bureau of Mines further emphasizes the importance of California operations in the present oil market. This situation has prevailed all year due to the constantly increasing production of the California fields. Since the end of June there has been a further increase in California crude oil production so that the July and August reports of the Bureau of Mines will no doubt show additional excess production in that State.

California Crude Oil

The government data for the first six months of this year show that crude oil supply increased 58,397,000 bbls. or 12.1 per cent over the same period last year. Of this total increase, 52,551,000 bbls. came from domestic fields and 5,846,000 bbls. from South American and Mexican fields.

This increase in production was in excess of current requirements as is shown by the fact that 31,015,000 bbls. of crude oil were added to storage from December 31, 1928, to June 30 of this year. In regard to domestic production, 29,024,000 bbls., or 55.2 per cent of the total increase of 52,551,000 bbls. came from California fields. Including the imports as well as domestic production, California operations account for 50 per cent of the increased supply so far this year.

Practically all of the remaining increased supply for the first half of this year came from Oklaoma and Texas. The crude oil production of the remaining oil-producing States considered as a unit was less than for the same period last year. Oklahoma crude oil production increased from 117,530,000 bbls. the first half of 1928 to 127,104,000 bbls. for the same period in 1929, an increase of 9,574,000 bbls. Texas production for the same corresponding periods, jumped from 123,247,000 to 142,069,000 bbls., an increase of 18,822,000 bbls. Thus the three main crude oil-producing states had an increase of 57,420,000 bbls., which exceeds the total increase of 52,551,000 bbls. for the United States.

It is worthy of note in this connection that most of the smaller oil-producing states are producing less oil this year than they did last year. Arkansas, Colorado, Illinois, Kansas, Kentucky, Louisiana, Montana, Ohio, Tennessee and Wyoming all showed a production decline for the first six months of 1929. For the 10 States, the first six months' production of 1929 totaled 64,828,000 bbls., a decrease of 6,918,000 bbls. under the same period in 1928. Among the smaller States, production increased in Pennsylvania, West Virginia, New York and Michigan. The production of the latter state jumped from 224,000 bbls. the first half of 1928 to 1,301,000 bbls. for the first six months of this year. The heavy demand and high prices for the Pennsylvania grade crude oil are responsible for the increased production in Pennsylvania, West Virginia and New York.

California has not had a ready market for its enlarged crude oil production as is evidenced by the fact that 19,357,000 bbls. were added to storage the first six months of this year. This is 62 per cent of the 31,015,000 bbls. added to storage in all fields. The June addition to California crude oil storage totaled in excess of 4,000,000 bbls. The bulk of the California increase in storage so far this year has been in the light crude. Stocks of light gravity crude increased

(Continued on Page 149)

CRUDE OIL AND REFINERY PRODUCTS SITUATION SUMMARIZED

(Bureau of Mines Reports—First 6 Months 1929 and 1928)

SUPPLY AND DEMAND—CRUDE OIL (Bbls.)

First 6 Months	Total Supply	*Total Demand	Excess Supply	Excess Pct.	Domestic Production	Imports	*Domestic Demand	Exports	Stocks June 30
1929	531,967,000	500,952,000	31,015,000	6.2	488,115,000	43,852,000	489,457,000	11,495,000	515,416,000
1928	473,570,000	454,770,000	18,800,000	4.1	435,564,000	38,006,000	446,000,000	8,680,000	484,643,000
Increase ..	58,397,000	46,182,000			52,551,000	5,846,000	43,367,000	2,815,000	30,773,000
Increase	12.1%	10.2%			12%	15.4%	9.1%	32.4%	6.3%

*Derived from government data. Includes some California fuel oil.

SUPPLY AND DEMAND—REFINERY PRODUCTS—GASOLINE (Bbls.)

First 6 Months	Total Supply	Total Demand	Excess Supply	Excess Pct.	Domestic Production	Imports	Domestic Demand	Exports	Stocks May 31
1929	210,093,000	201,698,000	8,395,000	4.2	206,578,000	3,515,000	172,702,000	28,996,000	41,461,000
1928	177,203,000	175,657,000	1,546,000	1.9	174,958,000	2,245,000	149,856,000	25,801,000	34,862,000
Increase ..	32,890,000	26,041,000	6,849,000		31,620,000	1,270,000	22,846,000	3,195,000	6,599,000
Increase	18.5%	14.8%			18%	56.6%	15.2%	12.3%	18.9%
KEROSENE									
1929	28,019,000	28,672,000	*653,000	2.2	27,914,000	105,000	18,354,000	10,318,000	8,348,000
1928	29,755,000	29,038,000	717,000	2.4	29,647,000	108,000	17,661,000	11,377,000	8,432,000
Increase ..	†1,736,000	†366,000			†1,733,000	†3,000	693,000	†1,059,000	†84,000
Increase	†5.8%	†1.2%			†5.8%	2.7%	3.9%	†9.3%	†1%
LUBRICATING OIL									
1929	17,243,000	17,567,000	*324,000	1.8	17,223,000	20,000	11,916,000	5,651,000	8,016,000
1928 ...	17,392,000	17,420,000	*28,000	.1	17,387,000	5,000	11,591,000	5,829,000	7,832,000
Increase ..	†149,000	147,000			†164,000	15,000	325,000	†178,000	184,000
Increase	†.8%	.8%			.9%	300%	2.8%	†3%	2.3%
FUEL AND GAS OIL									
1929	229,434,000	223,343,000	6,091,000		222,066,000	7,368,000	204,882,000	18,461,000	140,992,000
1928	209,097,000	206,519,000	2,578,000		204,602,000	4,495,000	182,894,000	23,625,000	130,319,000
Increase ..	20,337,000	16,824,000			17,464,000	2,873,000	21,988,000	†5,164,000	10,673,000
Increase	9.7%	8.1%			7.8%	63.9%	12%	†21.8%	8.1%
PETROLEUM WAX (Lbs.)									
1929	346,932,000	268,512,000	78,420,000	29.2	329,757,000	17,175,000	126,649,000	141,863,000	188,764,000
1928	324,905,000	383,554,000	*58,649,000	15.3	314,118,000	10,787,000	163,117,000	220,437,000	91,989,000
Increase ..	22,027,000	†115,042,000			15,639,000	6,388,000	†36,468,000	†78,574,000	96,775,000
Increase	6.8%	†29.9%			4.9%	59.2%	†22.3%	†40.1%	105%

*Excess demand. †Decrease. Note—Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments.

CRUDE OIL RUNS TO STILLS AND TOTAL ALL OILS (Bbls.)

	Total Crude to Stills	Domestic Crude to Stills	Foreign Crude to Stills	Natural Gasoline Blended at Refineries	†Gasoline Recovery Crude Oil	*Total Supply All Oils	*Total Demand All Oils	*Stocks All Oils June 30
1929	480,843,000	440,569,000	40,274,000	20,812,000	42.9	569,466,000	524,446,000	659,895,000
1928	434,477,000	401,602,000	32,875,000	16,892,000	40.3	502,351,000	476,352,000	615,606,000
Increase ..	46,366,000	38,967,000	7,399,000	3,920,000	2.6	67,115,000	48,094,000	44,289,000
Increase	10.7%	9.7%	22.5%	23.2%		13.3%	10.1%	7.2%

*Total all oils includes crude oil, refined products, natural gasoline and benzol. †Includes natural gasoline blended at refineries.

New Field for Scientist and Engineer

Bradford-Allegany District Experimenting With Production Methods That Require the Most Skillful Handling

By James McIntyre

The development of the Bradford and Allegany Fields, in northwestern Pennsylvania and southwestern New York, is becoming more and more a problem of the engineer, the chemist and the physicist.

There are 85,000 acres of productive oil sand in one body in the Bradford Field and about 20,000 acres in scattered pools in the Allegany Field. It is estimated that not more than 20 per cent of the oil content of the sands in the two fields has been recovered. The problem of recovering as much as possible of the remaining 80 per cent has held the attention of Bradford and Allegany producers for years, and the fact that the daily production of the two fields has risen from about 6,000 bbls. when flooding began to 31,000 bbls., and is steadily on the increase, is proof that the producers have met with success in their various methods of applying the flood to the sands.

Flooding in all its phases up to the present has been described in The Oil and Gas Journal by engineers, geologists and staff men of this publication, but events move so swiftly in the Bradford-Allegany district that it is always possible to relate a new story of the development of this 55-year-old field which reached the peak of production in the early eighties.

The rapidly growing use of the core barrel and core analysis, and the delayed system of drilling oil wells, are two of the interesting recent developments in the Bradford-Allegany district. The greatly increased volume of water necessary for flooding under the five spot method of operating has developed a water problem that is worrying producers, making it necessary for them in some cases to find a supply of water to supplement that which may be obtained on their own property. The drilling of water wells in the valley and the pumping of the water to hillside or hill-top properties for flooding purposes has become common, and a gigantic project of the Petroleum Reclamation Co. which calls for drilling a series of wells in the bed and banks of the Allegheny River and forcing the water in a 24-inch main to the top of the hill near State Line, several miles distant, is a future reality, as contract has been let for the laying of the line. The project will entail an investment of from $400,000 to $500,000. The plan of the Petroleum Reclamation Co., will assure the company and neighboring hill-top operators a plentiful supply of flood water for all time.

Filtration Systems

Another new feature of field development is the use of filtration systems to remove impurities from the flood water. The use of compressors to increase the pressure of water in the sand develops chemical changes in the water detrimental to the flooding system. This has led to the custom of having samples of water analyzed and the establishment of filtration plants for the removal of the damaging content, the most serious of which is iron oxide, which, converted into ferric hydroxide, partly or altogether seals the face of the sand in the water-intake wells.

The writer is indebted to Paul D. Torrey, of Torrey, Fralich & Simmons, geologists and petroleum engineers, for the short chapters on coring and the delayed system of drilling. Coring has been found invaluable in determining the most effective well spacing and water pressure, and the degree of efficiency of flooding operations, and is of considerable assistance in shooting. At the request of The Oil and Gas Journal Mr. Torrey has written the following on coring and core analyses:

Core Analyses

"The benefits that may be derived from core analyses of oil sands can be rather easily enumerated. It has been frequently emphasized, especially in The Oil and Gas Journal, May 17, 1928, that the results that can be obtained from the water flooding of any oil sand are largely dependent upon the characteristics of the sand itself. Some sands are particularly adapted to water flooding; others will return only moderately satisfactory results and certain sands will probably never be successfully flooded. It has been rather easy to establish, by comparison, the criteria that determine the suitability of a sand for flooding purposes. In consequence, much money may be saved by determining in advance by preliminary coring how suitable a sand is for water flooding before actual field experiments are attempted. It seems likely that water flooding will not be successful in oil sands that possess an average diameter of grain of over 0.2 mm. and experience has indicated that an average grain size of below 0.1 mm. is more desirable.

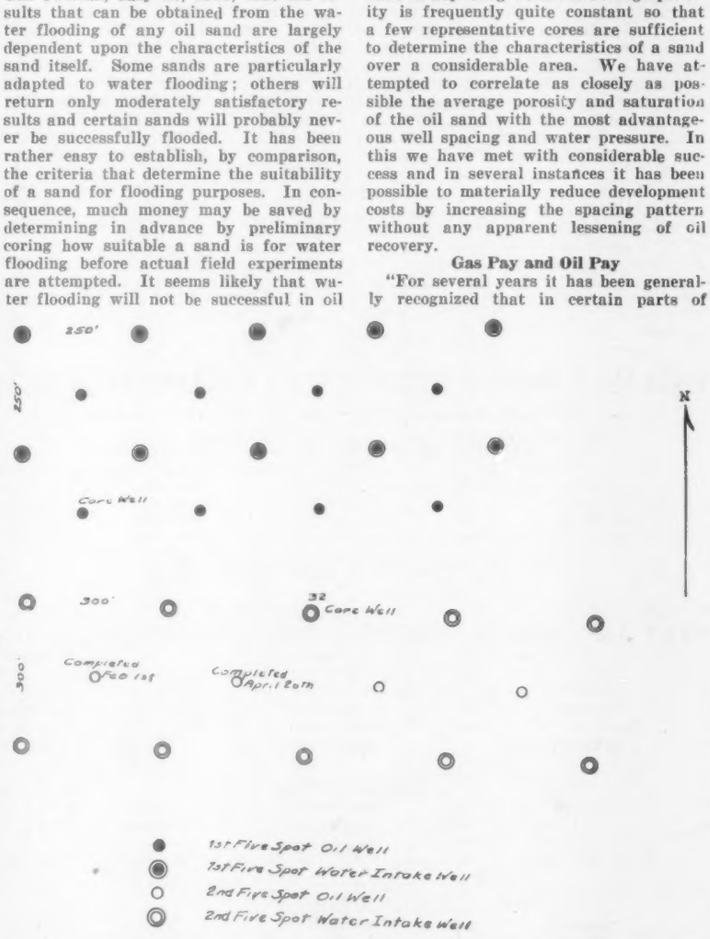
"In addition to determining the actual lithologic characteristics of an oil sand, core analyses enable a fairly accurate estimation of the oil content of the sand and it is therefore easily possible, by comparison with actual recoveries that have been previously obtained, to predict the yields that may be anticipated. Core studies are therefore of great assistance in intelligently appraising the value of a property.

"It is also possible by core analyses to learn the degree of efficiency of flooding operations on a property. It has been found on several properties that were giving what were believed to be very satisfactory results, that in reality the floods were not nearly attaining the possible recovery. In some instances it has been possible to make recommendations which have materially assisted in increasing the effectiveness of the flood.

"Not only do sand characteristics determine the results that may be obtained by flooding but also it is only reasonable to believe that some sands are adapted to certain well spacings and water pressures that would not be advisable for sands of different characteristics. It has been conclusively proven that although there are individual variations between the sand in adjoining wells the average porosity is frequently quite constant so that a few representative cores are sufficient to determine the characteristics of a sand over a considerable area. We have attempted to correlate as closely as possible the average porosity and saturation of the oil sand with the most advantageous well spacing and water pressure. In this we have met with considerable success and in several instances it has been possible to materially reduce development costs by increasing the spacing pattern without any apparent lessening of oil recovery.

Gas Pay and Oil Pay

"For several years it has been generally recognized that in certain parts of both the Bradford and Allegany Fields the upper part of the sand is gas pay. The position of this gas pay is usually rather definite and it can be identified with considerable certainty but in other parts of the field it has been found that there is frequently 1 or 2 feet of gas pay in the top of the sand which may not be recognized from drill cuttings. Gas pays must be packed and cemented off in order to insure the effective movement of water through the oil pay for the resistance of the gas pay to water movement, even if it possesses a lower porosity, is considerably less than that of an oil pay. On many properties that have given in every respect very satisfactory results, the lifting costs have been largely increased by the appearance of large volumes of water during what would be considered as the early life of the flood. In most cases it has been found that such conditions are due to these thin gas pays, which are almost indeterminable except by coring, and by cementing them off the efficiency of the flooding action is materially increased by forcing all of the water through the oil pay.



Map illustrates the text of the account of the first experiment on delayed drilling of oil wells under the five spot system of flooding. The wells in the upper group were drilled in the conventional five spot way. The lower group shows the wells on that part of the property developed under the delayed drilling system.

Assistance in Shooting

"Core analyses are of considerable assistance in shooting. It has been found in many cases that hardly one-third of the sand thickness can be flooded by present methods and consequently the shooting of the entire sand body is not only a waste of nitroglycerin but also is frequently responsible for extended cleaning-out jobs. It has been found to be good policy to vary the intensity of the shot to conform to the porosity of the sand; shooting the high-porosity sand lightly and concentrating the shot in the sand of lower porosity which possesses a greater resistance to fluid movement. By this procedure a more uniform flooding action is insured.

"As cores are being taken in increasingly greater numbers and it becomes possible to compare the sand from all parts of the field it is more and more apparent that water flooding, even under the most favorable conditions lacks a great deal in achieving the ultimate depletion of the oil sand. The recognition of this fact combined with our greatly enlarged knowledge of sand conditions and their effect upon oil recovery points the way to methods for increasing the efficiency of flooding operations. Any method which offers the slightest possibility for increasing oil recovery is worthy of serious consideration both from a conservation and an economic standpoint, for increased recovery will in most cases represent additional profit to the producer. Development, operating and land costs are generally easily determinable and are fairly constant and fixed factors. They cannot be reduced beyond a certain limit without endangering the ultimate return on invested capital but it does seem reasonable to believe that oil recovery can be increased, perhaps even beyond our highest expectations, by intelligently approaching the problem from a study of its fundamental factors."

Delayed Drilling

In order to intelligently describe the delayed system of drilling oil wells, a brief history of the development of the property on which this method was first applied is essential.

During the fall and winter of 1927-28 the line of water wells (Fig. No. 1), along the northern boundary of a property in the Allegany Field was drilled in co-operation with the adjoining neighbors. At this time the initial results from the first five-spot floods in the Bradford Field were beginning to become known, and instead of only drilling a line of oil wells according to the triangular system of flooding this flood was converted into one of the first five-spot floods in Allegany County. After the five-spot wells were completed offset oil wells were drilled south of the second line of water wells and during the time that these wells were being completed Torrey was consulted to determine whether it was possible to increase the efficiency of the operations on this property.

The results from the first five-spot flood had not been satisfactory. The water-intake wells on the property were taking a reasonable amount of water and the entire thickness of sand gave good oil shows when drilled. Analyses of the water showed that it was of good quality and suitable for flooding purposes. As a last resort Torrey recommended the taking of a core from the well indicated on the accompanying map. This core showed a thickness of about 20 feet of oil pay. The upper 16 feet of sand possessed a porosity ranging from 11 to 15 per cent. The lower 4 feet possessed a porosity of

(Continued on Page 148)

Oil Recovery By Natural Methods

Dealing With the Recovery of Oil and Gas Without the Aid of Mechanical Devices

By Hollis P. Porter, M. E.
Member of American Society of Mechanical Engineers

Ultimate recovery, when related to an oil well, means the total amount of oil which may be economically recovered from the well. Likewise, when considered with respect to a lease or pool, it is the total amount of oil that can be recovered economically from the area or unit under consideration.

Recovery by natural methods is the process of utilizing the forces of nature to recover the oil. For the purpose of the subject, the process of recovery is accomplished when the oil leaves the reservoir rock or sand, and enters the well. It will not be necessary to consider here how the oil is lifted to the surface and delivered into the stock tanks. In many new wells, the forces of nature are employed to lift the oil and deliver it some distance away, to tanks.

Lifting oil from wells can properly be considered under "air gas lift," "pumping," etc. But before these subjects are considered, it will be well to stick to the text and to assume that means of lifting oil, and water if present, will be provided; and that sufficient differential pressure will be maintained between the well and the reservoir rock to permit the oil to flow toward the well when impelled by the forces of nature. When such differential pressure cannot be economically maintained even though a simple lift pump, swab or other mechanical means is used, then the ultimate recovery has been attained.

The subject confines us to natural methods. No mechanical lift can be provided, which will create an artificial force, which might aid or retard the natural forces of nature. This would be encroaching upon other subjects, namely, pressure restoration, flooding, etc., each of which should be considered separately.

The forces of nature which may be utilized, are as follows:

(a) Gas pressure.
(b) Water pressure.
(c) Gravity.
(d) Combinations of a, b and c.

Now, here is where we must watch our step. It has been said that many good production men, not counting the hundreds of scientific petroleum engineers, geologists and others, have gone astray in trying to describe what happens at the bottom of a well or within the rock reservoir where the oil is held. At best, we must rely upon natural physical or chemical laws to base our theory, and if our theory is correct, it will work in practice.

Gas Pressure

The first of our natural forces is gas pressure. Gas is an elastic fluid. The energy stored in gas at various pressures in the vicinity of the oil as it is found in its natural state, is probably the most important source from which a natural force in the recovery of oil is to be obtained.

Gas is the chief expulsive agent in the majority of cases. Gas is absorbed by the oil under pressure, and the amount of gas which can be so absorbed is in direct proportion to the pressure. Natural gas reduces the viscosity of the oil more or less, depending upon the amount and the nature of the gas absorbed, and reduces the surface tension of the oil. Any reduction in viscosity helps to release the oil from the rock or sand.

By production decline curves, comparisons have been made which show that the best sustained recovery of oil is secured from wells when the forces from gas energy have been most efficiently utilized.

(Continued on Page 75)

SERIES OF ARTICLES ON PRODUCTION

By L. G. E. Bignell
Petroleum Engineering Editor

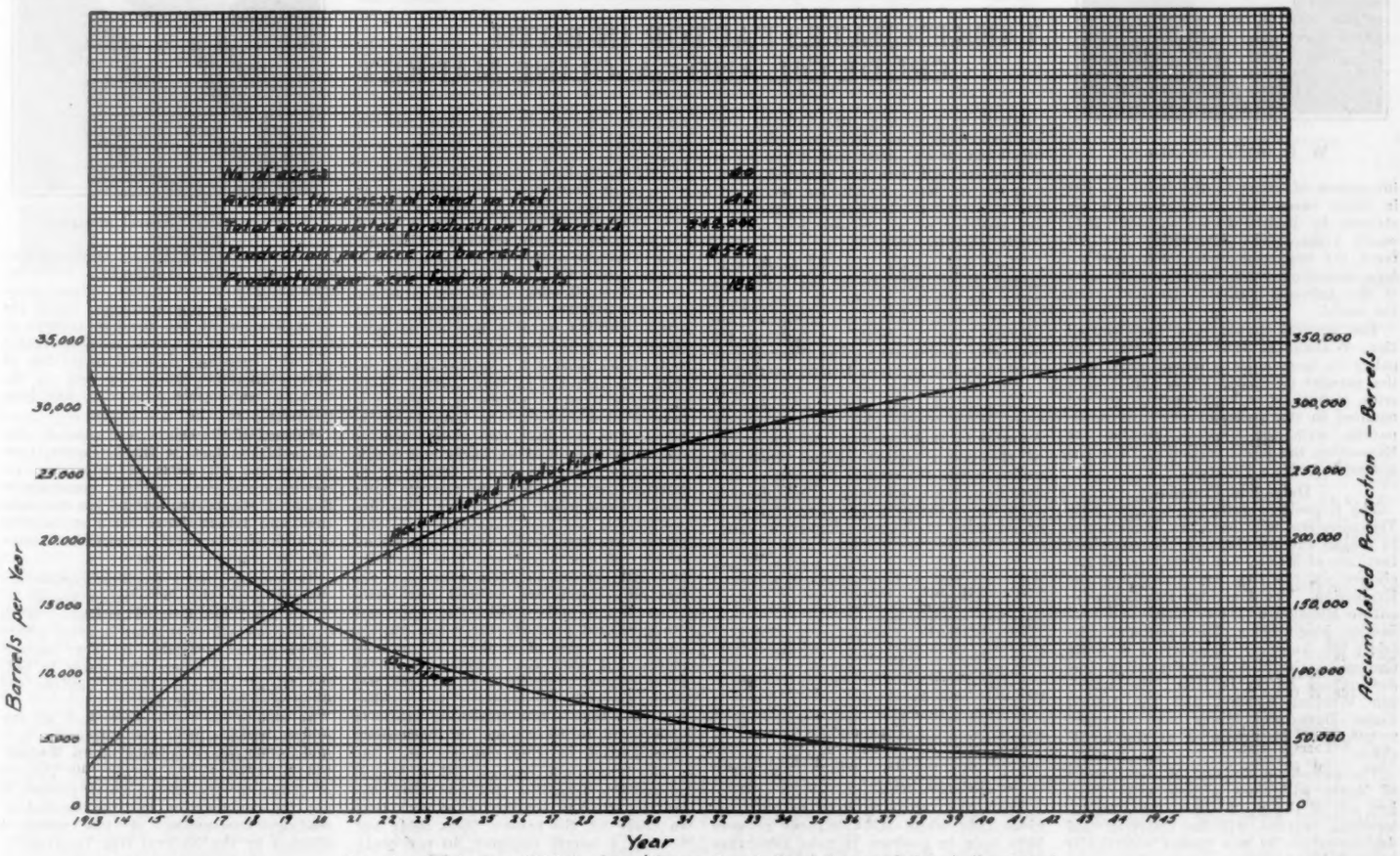
Based on the theory that summer reading should be of a somewhat lighter nature than the kind indulged in during the balance of the year, The Oil and Gas Journal has secured a series of carefully prepared articles on numerous production and operation subjects written primarily for the layman, whether he is in the office or field, who is interested in knowing what the engineers in the industry are doing.

The thought behind each article is to present in a clear and concise manner a review of the conditions governing that particular field of endeavor with which the paper deals. The engineer can also read this series with profit for the statements made are based upon facts that have been collected by these technicians during their professional work.

There is a certain continuity in the series that leads from one subject to the other and taken as a whole they will make a good set of reference articles for the files of anyone interested in such matters.

The articles are listed below together with proposed dates of publication:
August 15, "Recovery by Natural Methods," Hollis P. Porter.
August 22, "Artificial Methods of Recovery," Charles H. Pishny.
August 29, "A Study of Deep Well Pumping," Paul Williams.
September 5, "Use of Oil and Gas Separators," Charles L. Shirley.
September 12, "Disposal of Oil Field Waters," Ludwig Schmidt and John DeVine.
September 19, "Determination of Production Costs," James O. Lewis.
September 26, "Field Reports on Old Fields," H. B. Goodrich.
October 3, "Some Properties of Oil Sands," R. C. Beckstrom.

In order that the true value of such a series of papers may be judged by the authors and publishers it is desirable that the readers express their opinions and The Oil and Gas Journal will be interested to receive any comments on these papers, seperately or as a whole. If the idea seems to be favorably received other groups of papers and articles will be prepared and presented at later dates.



Example taken from an Oklahoma Lease. Curves show decline and accumulation of oil recovered.

Novel Features for the Oil Exposition

Intensive Drive to Assure That Latest Achievements Will Be Represented at the Opening in October

That the potentialities and scope of the International Petroleum Exposition and Congress have been but dimly outlined has become evident during this year's preparations for the "World's Fair of the Oil and Gas Industry."

Because the Exposition has provided a clearing house for ideas in oil and gas activities, a meeting place for men, methods and machinery, and because of its ideal location in the Oil Capital of the World, the oil and gas show might have continued on the momentum it has gained without the intensive drive now on to bring here the latest achievements, from hydrogenation to the Diesel airplane motor, for the most instructive array of displays and demonstrations in the history of the industry.

The fact is well known that thousands of patents are applied for annually on

W. G. Skelly, President

inventions of value to the industry, but in many cases their employment is restricted by limited financial backing to small areas. The Exposition has offered the best and least costly medium for presenting these inventions to men of the industry gathered from all over the world.

The general manager of the Exposition, William B. Way, has made it his policy to communicate immediately with the persons concerned when new discoveries, inventions or improvements are announced in the trade journals and newspapers, with the view of making the Exposition the latest edition of "The Oil & Gas Industry's Progress."

Dates and Program

The Exposition dates are October 5-12. Technologists will have an opportunity to attend the meetings of the American Institute of Mining and Metallurgical Engineers on the two days preceding the Exposition. The American Petroleum Institute Division of Development and Production Engineering, Mid-Continent District; the American Association of State Geologists, the Mid-Continent Oil & Gas Association, Safety Division; the American Welding Society, and the United States Bureau of Mines have arranged programs to be presented at the Exposition.

The petroleum division of the Bureau of Mines will show a new safety car, just out of the St. Louis shops. An interesting feature will be the first aid demonstration by two robots, electrically controlled automatons. One of the iron men takes the role of victim and reacts in a life-like way to the ministrations of the other.

In the Exposition contests the tug-of-war, horse shoe pitching and the like have been eliminated in favor of demonstrations in derrick nail driving, heavy machinery loading and unloading, pipe laying, welding under difficult conditions, tool dressing (with the results scientifically tested), wire line and bull rope splicing, tubing and rod crew inspection contest, and many more exhibitions in this category.

Among the exhibits in the scientific and technical building will be:

Welding processes, one of which uses electrical heat in welding sheet steel as light as 30 gauge at high speed and which produces a weld so ductile that beading may be made across it without danger of cracking. This weld will take enamel. Aluminum and its alloys are said to be readily welded by this process, and it is claimed, in half the time of welding with the gas torch.

Geology: The Oklahoma Geological Survey has made several additions to its section. These displays, according to Dr. Charles N. Gould, director, are the most complete presentation of geological specimens in the world. The Kentucky Geological Survey is the first of more than a dozen state surveys which have announced intention to participate.

Dr. M. M. Leighton, state geologist of Illinois; Dr. Charles Gould, and A. I. Levorsen, president of the Tulsa Geological society, are preparing a program for Geologists Day, October 8, when the American Association of State Geologists will meet at the oil show.

The marketing division will be well represented. A suggestion of Henry M. Dawes, president of the Pure Oil Co., to the general manager, for a discussion at the Exposition on the means and ways of putting into effect the code of marketing practices recently approved by the Federal Trade Commission and the A.P.I., is being worked out.

Drilling operations: There will be 11 derricks on the grounds and six will be in operation. One of the holes has been plugged at 700 feet and during the show the bit will go through the cement to continue deeper.

Beside the operation of various types of drilling units there will be spudding machines, displays of winches, core drilling set ups working on blocks of cement and stone, hard-surfacing and tool dressing demonstrations, and contests in inspection of the derrick preliminary to starting of work.

In the new $25,000 auditorium building there will be lectures on deep well drilling, repressuring problems, principles controlling spacing of oil wells, spacing gas wells, tubing high pressure gas and oil wells, electrical welding of field joints of oil and gas pipe, development of the theory of the air gas lift, classification of flowing wells and adjustment of flow strings. Mid-Continent practice in handling flowing wells (natural and gas lift), results of experiments on resistance to flow of oil and gas mixtures in vertical pipe, and many other topics.

Occupying as favored a place as the magnetometer, gravitometer, torsion balance and seismograph, will be a sturdy precision instrument which tests and records on a chart the lubrication value of oils and other liquids at varying temperatures. This instrument will run hot tenacity tests on any oil, drawing mechanically a viscosity curve from 100 degrees Fahrenheit (or any other temperature desired) up past the point of transition to the points of film-thin and film-rupture, until the oil has lost its practical lubrication value. It will draw a cold fluidity test curve from 100 degrees Fahrenheit to the point down where the oil becomes stringy and channels.

General Manager Way is making arrangements to bring out the latest development in instruments for surveying well holes. This apparatus is said by experts to detect and measure accurately deflections in the courses of drifting holes, in feet and inches directly. It writes the story so that anyone with a knowledge of elementary mathematics can read the record correctly.

Interesting Exhibits

Another interesting exhibit will be that of the improved low temperature fractionating apparatus, completely equipped

W. B. Way, General Manager

for the analysis of a wide range of gaseous and liquid hydrocarbon mixtures. The analysis of motor fuel, natural gasoline, gaseous mixtures of many kinds, the determination of the gasoline content of oils used in absorption gasoline plants and the isolation of small quantities of pure compounds are but a few of the uses to which this apparatus has been put.

Several of the booths will show a wide range of pyrometers, thermometers, flow meters and all kinds of indicating, recording and controlling instruments. Some of these instruments are not only time and labor savers but also capable of automatic control practically impossible by manual methods.

Beside the usual gasoline combustion engines there will be a large display of Diesel and gas-gasoline engines. With drilling operations running in areas where water is not available in large enough quantities, and where the water is bad, the Diesel and gas-gasoline engines are being used to advantage.

It should be understood that at the exhibits there will be attendants who will furnish whatever information is desired. For instance, in the natural gas display of orifice meters, the principal feature is not the construction but the method of reading, conforming to the standard adopted by the Natural Gas Department

(Continued on Page 73)

TANKER RATES FACTOR IN BOTH CRUDE OIL AND GASOLINE MARKET

NEW YORK, Aug. 10.—Current talk in Eastern oil trade circles regarding the possibility of an increase in the price of bunker fuel oil here has centered attention on the ocean freight market, which has an important bearing upon the market position of all refined products at North Atlantic ports.

There has been a material increase in tanker rates thus far in the year, and while the current market is under peak for the year, prices now prevailing are sharply over the levels in effect at the beginning of the year. The transatlantic market is also in much firmer position.

With East Coast refiners receiving a large part of their supply of crude oil from West Texas and northern South America by tank steamer, the importance of the ocean freight market upon the selling prices for refined products in this area is at once manifest. The following table shows the price per barrel for tanker shipment in the more important runs:

	Jan. 1 (Cts.)	High for Year (Cts.)	Current (Cts.)
Crude—Gulf and Ventzuelian to North of Hatteras	16	45	39
Gasoline and kerosene—Gulf to North of Hatteras	37	40	35-40
Crude, fuel oil, gas oil—California to North of Hatteras	50	88	*88
Gasoline and kerosene—California to North of Hatteras	63	1.07	*96
Gasoline and kerosene—Gulf to U. K. Continent	12s.3d	23s.6d	24s. 23s

*Consecutive trips.

From the foregoing it is at once obvious that while Mid-Continent refiners have been in position to take advantage of any lower prices for crude oil, Atlantic Coast refiners utilizing crude from the Gulf territory and from Venezuela and Colombia as well have been confronted with rising crude costs, with the current laid-down price here 23 cents a barrel over that prevailing at the beginning of the year, an increase of close to 150 per cent in freight rates. Under these circumstances, the need for a higher return on bunker fuel oil sales is evident, assuming that the refiners plan to continue their profit margins on this product at previously prevailing levels.

A higher market for bunker oil, to reflect this increase in transporting crude to North Atlantic refineries, would appear a likelihood for the immediate future. For the past two years, due to the heavy flow of West Texas and South American crude to North Atlantic refineries, the Eastern Coast markets have been oversupplied with crude. Selling competition has been unusually keen, and prices have been forced down to levels at which refiners have been able to show but little profit on their operations on this oil. Heretofore, refiners have been in position to make gasoline, kerosene and other refined products carry the burden created by sales of bunker "C" at low prices, but with the markets for these other refined products now in weak position as well, the necessity for making fuel oil return a fair marketing profit is understood to be coming in for serious consideration in trade circles.

The increase in transportation charges on gasoline from the Gulf to North Atlantic ports has not kept pace with that on crude oil, the present basis being but 8 cents a barrel (roughly 40 per cent)

(Continued on Page 75)

Control of Effective Backpressure

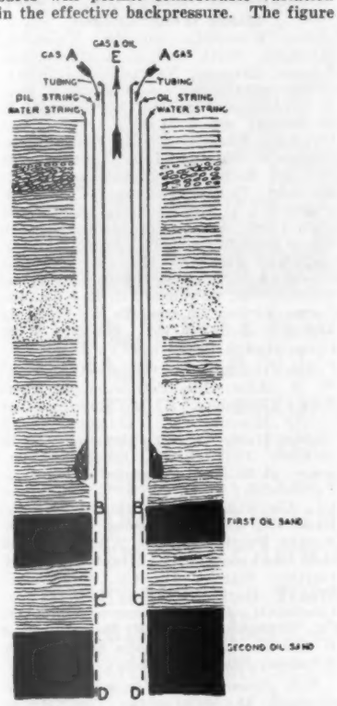
Flexibility Largely Responsible for Means of Obtaining Lower Gas-Oil Ratios. Four Convenient Means for Control

Prepared by R. H. Pence, for the Bessemer Gas Engine Co.*

In this particular well there was no increased cost on account of increased amount of gas circulated. When the tubing or flow line was changed to permit the larger volume the working pressures changed to the point where single instead of the two-stage compression could be used. This permitted handling a larger volume with the same horsepower requirements, the cost being proportional to the horsepower used.

Control of Backpressure in Lift(14)

In gas lift operation there are four convenient means for the control of the effective backpressure. Adjustments in tubing diameters, tubing depths, gas volume circulated and tubing head pressures will permit considerable variation in the effective backpressure. The figure



illustrates condition in the average gas lift well. Gas is introduced between the tubing and oil string at A, passing down between the tubing and oil string to the bottom of the tubing C and the oil and gas flowing up the inside of the tubing to the surface E. The casing-head pressure at A less the pressure drop due to the friction of the gas flowing from A to B and plus the static head of the gas from A to B is equal to the pressure at B which is the effective backpressure at the top of the first oil sand. The pressure at B, less the pressure drop due to the friction of the gas flowing from B to C, and less the pressure drop due to the friction of the oil entering from the first oil sand and flowing from B to C, and plus the static head of the oil and gas from B to C, is equal to the pressure at C. The pressure at C is also equal to the pressure drop due to the friction of the oil and gas flowing from C to E, plus the static head of the oil and gas from C to E and plus the tubing head pressure at E due to flow nipples, beans or trap pressure. The pressure at C plus the pressure drop due to friction of the oil and gas entering from the second oil sand and flowing from D to C and plus the static head of the oil and gas from C to D is equal to the pressure at D, which is the effective backpressure at the bottom of the well. This pressure cycle can be varied within certain limits to increase or decrease the effective backpressure on the first oil sand and at the same time either decrease or increase the effective backpressure on the second oil sand by adjustments in tubing diameters, depth, gas volume circulated in tubing head pressure. Thus the flexibility of effective backpressure control in gas lift operation is largely responsible for the means of obtaining lower gas-oil ratios than possible under other methods of operation. The accompanying production curves are illustrations of the gas-oil ratios obtainable with gas lift operation in Southern California wells.

Air-Gas Lift Organization and Methods[15]

Developments in air-gas lift operations have resulted in the adoption of approved methods in connection with installation and operation of equipment. The organization to handle a large production in addition to the executive engineer will require a personnel about as follows:

1. Plant construction.
   - Designer.
   - Construction boss.
   - Construction gang.
2. Plant operation.
   - Mechanical engineer.
   - Operators.
   - Inspectors.
   - Repair men.
3. Well equipment installations.
   - Boss.
   - Roustabouts.
4. Meter equipment.
   - Chief meter man.
   - Operators for
     - Installing.
     - Repair work.
     - Changing charts.
     - Chart computations.
5. Reports and statistics.
   - Chief clerk.
   - Statisticians.
   - Typists.
6. Testing of wells.
   - Chief testing engineer.
   - Assistant engineers.

In the training of men for this work

(Continued on Page 150)

DATA APPLYING TO WELLS FLOWING NATURALLY
S. F. Shaw

Field	Depth feet	Submergence ft.	Lift feet	Bbl. oil per day	Gas-oil ratio	Cu.ft.gas required at 100%	Per cent efficiency obtained
Brock, Okla.	2,000	813	1,187	1,220	1,160	55.0	4.7
Cromwell, Okla.	3,400	2,210	1,190	....	12,500	41.3	0.3
Salt Creek	2,200	1,400	800	152	1,000	31.3	3.1
Seminole, Okla.	4,034	1,124	2,910	4,500	707	117.7	16.6
Tonkawa, Okla.	4,100	3,372	728	1,518	2,120	26.3	1.2

DATA APPLYING TO ARTIFICIAL AIR AND GAS LIFTS

Field	Depth feet	Submergence ft.	Lift feet	Bbl. oil per day	Gas-oil ratio	Cu.ft.gas required at 100%	Per cent efficiency obtained
Baku, Russia	1,464	694	770	1,886	134.4	43.4	32.3
California	3,368	320	3,048	380	1,689	200	11.9
Currie, Texas	3,000	1,240	256	4,100	84	11.6	13.8
Dominguez, Cal.	4,000	684	3,316	300	2,300	165.7	7.2
Huntington Beach, Cal.	4,519	718	3,801	270	3,150	189.2	6.0
Huntington Beach, Cal.	4,500	770	3,730	214	3,533	181.2	5.1
Independence, Kan.	1,393	569	824	....	190.7	47.38	24.9
Santa Fe Springs, Cal.	3,700	517	3,183	259	1,077	159.3	14.8
Seminole, Okla.	3,968	450	3,518	1,680	915.6	192.8	21.1
Tonkawa, Okla.	4,127	685	3,442	1,994	823	161.9	19.7

METHOD OF WORKING UP DATA FOR PURPOSES OF COMPARISON*

		Well 1	Well 2
1.	Barrels oil per day	2,860	200
2.	Barrels of water per day	.....	.....
3.	Total fluid per day (barrels)	2,860	200
4.	Total fluid per second (cubic feet)	0.1861	0.0130
5.	Gas furnished per day	480,000	650,000
6.	Natural gas per day	1,305,000	185,000
7.	Total gas per day	1,785,000	835,000
8.	Total gas per second (cubic feet)	20.68	9.67
9.	Total gas-oil ratio (cubic feet per barrel)	624	4,175
10.	Furnished gas-oil ratio (cubic feet per barrel)	168	3,250
11.	Natural gas-oil ratio (cubic feet per barrel)	456	925
12.	Weight total liquid per second (pounds)	9.55	0.68
13.	Weight total liquid per second (pounds)	1.55	0.72
14.	Total weight lifted per second (pounds)	11.10	1.40
15.	Depth of tubing	4,216	4,108
16.	Submergence in feet	1,340	264
17.	Lift in feet	2,876	3,844
18.	Velocity at top in feet/seconds 1/2	114.0	41.4
19.	Velocity at bottom in feet/seconds 1/1	8.44	7.42
20.	Difference in velocity (V_2-V_1)	105.56	33.98
21.	P_1 (abs.)	493.4	126.4
22.	P_1 corrected (abs.) bottom well	493.0	109.7
23.	P_2 corrected (abs.) bottom well	28.4	19.4
24.	R_1 P_1/P_2	34.23	7.62
25.	R_2 P_1/P_2	17.36	5.66
26.	Total work in gas through R_1 foot pounds/seconds	151,500	40,700
27.	Total work in gas through R_2 foot pounds/seconds	121,780	34,780
28.	Total work lifting liquid + gas + acc. ft. pounds/seconds	33,834	5,407
29.	Total work lifting liquid foot pounds/seconds	27,450	2,614
30.	Total work lifting gas foot pounds/seconds	4,460	2,768
31.	Total work lifting acc. liquid + gas foot pounds/seconds	1,924	25
32.	Total work unaccounted for foot pounds/seconds	87,916	29,373
33.	E_1 Work lifting liquid, per cent (Work in gas through R_2)	22.60	7.53
34.	E_2 Work lifting gas, per cent (Work in gas through R_2)	3.67	7.97
35.	E_3 Work of acceleration, per cent (Work in gas through R_2)	1.58	.07
36.	E_4 Work lifting liquid + gas + acc., per cent (Work in gas through R_2)	27.85	15.57
37.	Unaccounted for work, per cent (Work in gas through R_2)	72.15	84.43

*Principles of Air-Gas Lift Practice, by H. R. Pierce and James O. Lewis—The Oil and Gas Journal, October 20, 1927.

GAS LIFT ON CALIFORNIA WELLS

Well No.	Bbls. oil per day	Mcf gas out per day	Operating pressure absolute	Mean pressure	Flow area of eductor, sq. ft.	Velocity ft./sec. at bottom	Vel. ft./sec. @ mean pres.	Vel. ft./sec. at discharge	Spec. grav. oil	Weight of oil lbs. per sec.	Length of eductor, ft.	Submergence feet	Lift, feet	Work lifting oil ft. lbs. per sec.	Work accelerating oil ft. lbs. per sec.	Total work ft. lbs. per sec.	Total work in gas-ft. lbs. per sec.	Efficiency %
1	807	1,100	365	47.9	.03247	16.4	95.2	393	.8974	2.94	4,195	898.6	3,296	9,691	7,092	16,784	87,813	19.1
2	367	810	265	43.1	.03247	15.	75.2	290	.9150	1.36	3,729	629.6	3,099	4,215	1,761	5,977	58,185	10.3
3	200	760	375	48.3	.03247	10.6	64.5	272	.9409	.76	4,092	881.5	3,210	2,440	586	3,026	61,178	5.4
4	457	525	255	42.5	.04882	7.8	33.2	135	.9036	1.68	4,040	611.9	3,428	5,759	472	6,231	37,185	16.7
5	40	391	185	37.6	.03247	11.	39.0	138	.9272	.30	3,547	422.5	3,124	937	95	1,032	24,500	4.2
6	360	850	185	37.6	.03247	24.	87.0	286	.9217	1.35	3,463	450.0	3,038	4,101	1,706	5,807	53,267	10.9
7	38	325	165	36.0	.04882	6.8	23.0	77	.9459	.15	3,000	365.4	2,635	395	12	407	19,559	2.1
8	166	350	265	43.1	.04882	4.6	21.7	83	.9296	.62	3,352	619.7	2,732	1,721	69	1,790	25,216	7.1
9	117	375	235	41.3	.04882	5.6	25.9	89	.9271	.45	3,698	450.9	3,157	1,421	55	1,476	26,883	5.7
10	131	300	245	41.9	.04882	4.9	19.0	71	.9264	.49	3,520	570.9	2,949	1,445	40	1,485	21,021	7.1
11	209	460	245	42.0	.04882	4.7	26.7	109	.9309	.79	3,669	816.8	2,792	2,206	142	2,348	36,114	6.5
12	154	380	295	44.7	.04882	4.5	22.9	90	.9253	.58	3,590	697.2	2,893	1,678	73	1,751	28,286	6.2
13	610	820	295	44.7	.03247	15.	74.8	293	.9050	2.24	3,800	712.8	3,087	6,915	2,997	9,912	61,162	16.2
14	797	1,100	335	46.6	.03247	17.8	97.1	394	.8917	2.89	4,320	826.9	3,493	10,095	6,971	17,066	85,430	20.0
15	342	870	195	38.5	.04882	15.6	58.6	208	.8557	1.19	4,200	484.6	3,715	4,421	817	5,238	56,211	9.3
16	265	835	235	41.3	.04882	12.4	53.2	199	.9447	1.02	4,170	536.6	3,633	3,706	631	4,337	57,545	7.5
17	381	1,100	180	37.3	.03247	31.9	113.2	390	.8861	1.37	3,850	429.0	3,421	4,687	3,173	7,859	68,381	11.5
18	547	709	325	46.2	.03247	11.8	63.0	254	.9091	2.02	3,349	785.8	2,563	5,178	1,996	7,173	54,673	13.1
19	476	800	315	45.7	.03247	13.6	71.5	286	.9150	1.77	3,797	755.5	3,041	5,383	2,285	7,668	61,011	12.6
20	300	700	555	54.2	.08544	2.6	20.8	95	.9929	1.21	2,928	1,253.2	1,675	2,026	171	2,198	63,320	3.5
21	293	685	285	44.2	.03247	12.7	62.5	245	.9150	1.09	4,350	679.9	3,670	4,000	1,018	5,018	50,536	9.9
22	240	590	185	37.6	.03247	16.7	60.5	211	.9073	.88	4,450	431.7	4,018	3,536	619	4,155	37,034	11.2
23	296	600	235	41.3	.04882	9.	38.3	143	.9126	1.10	4,180	555.4	3,625	3,987	346	4,333	41,369	10.5
24	165	550	160	35.6	.03247	17.9	58.5	196	.9121	.61	4,873	366.3	4,507	2,749	342	3,092	32,691	9.5
25	227	810	315	45.7	.03247	13.5	71.9	290	.9346	.86	3,878	739.6	3,138	2,699	1,091	3,790	61,774	6.1
26	900	600	435	50.5	.09087	2.9	18.1	77	.9790	3.58	2,615	988.5	1,626	5,823	331	6,154	50,584	12.2
27	350	550	375	48.3	.09087	2.8	16.9	70	.9873	1.40	2,752	840.2	1,912	2,677	108	2,784	44,353	6.3
28	241	358	175	36.9	.04882	7.2	24.9	85	.9132	.89	3,276	403.7	2,872	2,556	100	2,657	22,078	12.0
29	214	367	285	44.2	.04882	4.6	22.4	87	.9211	.80	3,331	675.2	2,656	2,124	91	2,216	27,198	8.2

Loomis Oil Well Control Co., Long Beach, Calif.

*This is the fifth of a series of articles on air and gas lift. The first article of the series was published in the April 18 issue of The Oil and Gas Journal; the second, May 2; the third, May 30; and the fourth, July 11.

(14)F. W. Lake, Supt. of Prod., Brea Div., Union Oil Co. of Calif. Oil Age, Nov. 1927.

[15]S. F. Shaw, Engineer on Production Economics. June 7, 1928.

Committees Selected to Apply Code

Announcement of Personnel of National Committee on Interpretation and Regional Committees Made by A.P.I.

W. R. Boyd, executive vice president of the American Petroleum Institute, announces that the list of the members of the National Committee on Interpretation of the Code of Ethics governing the marketing of refined petroleum products and the six regional committees is complete. Under each regional committee is indicated the list of members of state or other subcommittees where and so far as reported. The sub committee list is only partial and many of the committees are yet incomplete.

National Committee on Interpretation of the Code

Chairman: H. T. Klein, The Texas Company, New York; E. S. Hall, Standard Oil Co. of New Jersey., New York: E. L. Shea, Tide Water Associated Oil Co., New York; Roy B. Jones, Panhandle Producing & Refining Co., Wichita Falls: W. R. Boyd, Jr., American Petroleum Institute, New York.

Pacific Coast Region
(Washington, Oregon, California, Nevada and Arizona)

Regional Committee—Chairman: K. R. Kinsbury, Standard Oil Co. of California. San Francisco; G. Legh-Jones, Shell Co. of California, San Francisco; Wm. F. Humphrey, Associated Oil Co., San Francisco; J. A. Talbot, Richfield Oil Co., Los Angeles; Lionel T. Barneson, General Petroleum Corp., Los Angeles; Jacques Vinmont, Texas Co. of California, Los Angeles; W. L. Stewart, Union Oil Co. of California, Los Angeles.

Sub Committees—No sub committees yet reported.

Rocky Mountain Region
(Montana, Idaho, Wyoming, Utah, Colorado and New Mexico)

Regional Committee—Chairman: E. T. Wilson, Continental Oil Co., Denver; T. A. Dines, Midwest Refining Co., Denver; F. C. Cramer, Denver Powerine Co., Denver.

Sub Committees—No sub committees yet reported.

Southwestern Region
(Texas, Arkansas and Louisiana)

Regional Committee—Chairman: Roy B. Jones, Panhandle Producing & Refining Co., Wichita Falls; E. T. Moore, Simms Oil Co., Dallas; E. R. Brown, Magnolia Petroleum Co., Dallas; F. M. Smith, Oriental Oil Co., Dallas; C. A. Middleton, Kent-Middleton Refining Co., Corsicana; W. S. Farish, Humble Oil & Refining Co., Houston; E. J. Marston, Texas Pacific Coal & Oil Co., Fort Worth; T. J. Gay, Gay Oil Co., Little Rock; Thos. C. Anderson, Liberty Oil Co., New Orleans; M. J. Grogan, Louisiana Oil & Refining Co., Shreveport.

Sub Committees—(Texas) Chairman: Edward T. Moore, Simms Oil Co., Dallas; E. P. Angus, Magnolia Petroleum Co., Dallas; B. W. Fitzgerald, Pierce Oil Corp., Dallas; F. R. Schneider, Simms Oil Co., Dallas; W. Hal Noble, The Texas Company, Dallas; Frank M. Smith, Oriental Oil Co., Dallas; C. A. Middleton, Middleton Refining Co., Corsicana; Floyd Casey, Home Oil Co., Waco.

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(Continued on Page 149)

EDWARD PRIZER DIES UNEXPECTEDLY; CHAIRMAN OF VACUUM OIL COMPANY

NEW YORK, Aug 12.—Edward Prizer, chairman of the board of the Vacuum Oil Co., died at Orange Memorial hospital, Orange, N. J., Sunday of heart trouble. Mr. Prizer's death was unexpected, he having been active up to the time of his death. He was 73 years of age and is survived by three sons, two daughters, and two brothers. Funeral services were held Monday from his late home at East Orange.

Mr. Prizer was born at Doylestown, Pa., March 3, 1856. On completing his education he went into the newspaper business in New York City. He was sent to Rochester, N. Y., then headquarters for the Vacuum Oil Co. in 1880, and became acquainted with Charles M. Everett, president of the Vacuum company. This was the turning point in his career. Upon organization of the sales department of the Vacuum company in 1882 Mr. Prizer was appointed sales manager and organized the department for domestic and foreign distribution, being actively identified with the company's growth up to the time of his death.

Mr. Prizer spent much of his time in the field and lived abroad for many years developing export outlets for Vacuum products. He was recognized as an authority on foreign affairs, particularly with reference to the oil industry. In 1918 Mr. Prizer, then a director and senior vice president, was made president of the company succeeding Charles M. Everett. He held that post until 1924 when he was made chairman of the board.

During the World War he served as a

Edward Prizer

member of the Petroleum War Service Committee.

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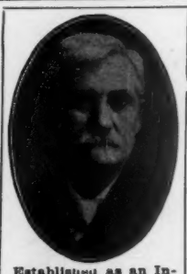
The OIL and GAS JOURNAL

PRODUCING REFINING ENGINEERING MARKETING

Published Weekly by
THE PETROLEUM PUBLISHING COMPANY
114-116 West Second Street
TULSA, OKLA.



Established as an International Publication in 1910 by Patrick C. Boyle.

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TERMS OF SUBSCRIPTION
(By Mail, Postage Prepaid)

Single copies	$ .15	One year (in United States)	$6.00
Three months	$2.00	One year (in Canada)	$7.00
Six months	$3.00	One year (foreign countries)	$7.00

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CONSUMPTION GAINS, BUT——

Once more we hear the oil situation isn't so bad and the unexpectedly large gain in demand is pointed to as proof.

It is true it might have been a great deal worse if it had not been for that remarkable increase in consumption.

But that simply means the industry was lucky in escaping the full consequences of its folly in competitive overproduction of both crude and its principal refined product, gasoline.

In the case of crude oil, demand for the first six months of the year was in excess of 500,000,000 bbls. so that we are already in the billion barrel year.

This was an increase of 10.2 per cent over the consumption of crude in the same period last year whereas an increase of but 4 or 6 per cent has been the rule.

In regard to gasoline the total demand was over 201,000,000 bbls. for the first half of the year, pointing to a total for 1929 in excess of 435,000,000 bbls. if the present rate of consumption is maintained for the balance of 1929.

This was an increase for the first half year of 26,000,000 bbls. or 14.8 per cent over the like period of 1928 where ordinarily an increase of but 20,000,000 bbls. might have been expected.

The total increase in the full year of 1928 was 40,583,000 bbls.; for the year 1927 it was 36,732,000 bbls. and for 1926 it was 40,296,000 bbls. over the preceding year.

So with a more than 10 per cent increase in demand for crude and an almost 15 per cent gain in the consumption of gasoline during the first six months of this year the industry is facing the greatest increase in demand in its history.

By all these facts it should be on the high road of prosperity, but instead we find it threatened with a lower market in the height of the consuming season unless some corrective action is taken.

That totally unexpected increase of almost 15 per cent in demand for motor fuel, practically 50 per cent more than the highest estimate at the opening of the year, has not brought proportionate prosperity but has only helped to prop a falling market from greater decline resulting from competitive overproduction in both the producing and refining branches of the industry.

Anyone can figure for himself what the market would be today if there had been only a normal 10 per cent increase in gasoline consumption in the first half of the year.

But can anyone figure out any excuse for an overproduction which still left a market-breaking surplus after such an unexpected increase in demand?

During the first six months of the year the refining industry increased its crude runs to stills 10.7 per cent coupled with a substantial increase in yield through increased plant efficiency, the net result being a gain of 18.5 per cent in production and an excess supply of 8,395,000 bbls. at the close of June, the latest government figures available.

This is the condition that has forced price concessions and left the market in the present condition with which the industry has often been familiar and from similar reasons.

This situation is the more aggravating when it is considered that this excess supply, while comparatively small, was just enough to break the market and that conservative control of operations curtailing output not more than 2 or 3 per cent could have maintained a favorable market throughout the summer and the remainder of the year.

It is not as if the situation was unprecedented or the industry had been facing new or unfamiliar conditions. The remedy was known and had been demonstrated in application before.

The crude oil situation is just as plain. According to the Bureau of Mines report for June all the crude surplus added to storage in June was confined to California. East of California the demand practically equalled the production, substantially no larger than last year's except in Texas and Oklahoma.

Yet the simple fact that producers are able to dispose of their oil does not necessarily mean that they are not contributing to overproduction for the country as a whole.

Selling production in a market that properly belongs to competitors only shifts the surplus that must be disposed of at price concessions which speedily react all over the industry.

This is as true of the refining industry as the crude production branch.

The increase in demand, large as it was, was not enough to take care of the still greater increase in production of crude and gasoline and in that case the surplus undisposed of invariably establishes the price.

The unlooked-for gain in consumption has helped some in keeping the surplus from being larger and thereby averting lower prices. The constantly increasing efficiency in operations, reducing costs and increasing yield, has enabled the refining industry to get by with lower prices than would formerly have been possible. The crude producers have not. The net result is far from what it might have been and should have been had the industry been more practical.

It is late in the season to attempt anything, but something must be tried. Precautions can at least be taken to avoid making matters worse.

The latest news from California is that the gas conservation law which becomes effective August 31 will not be initiated until the middle of September because of operating considerations.

The difficulties of the situation in California are well understood as well as the necessity of avoiding false steps. It is recognized that it is better to make haste slowly and to be sure of the ground. Too much depends upon the outcome, not only on the Pacific Coast but throughout the industry, to permit of any mistake.

In the meantime it will be unfortunate if anyone in the industry is misled into an assumption that because consumption has increased so much beyond expectations overproduction will soon be overtaken.

Eventually that happy climax will be reached but not until the industry as a whole gives more practical consideration to balancing its production program with some definite idea of what the demand will be.

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Determine Efficiency of Absorber

Check Oil and Gas Ratio Formula Against Data on Actual Performance in Gasoline Plant Operation

By E. R. Cox, The Texas Company and M. L. Arnold, Richfield Oil Co.*

The object of this investigation was to find a relation, if possible, between the oil to gas ratio, together with the other working conditions of an absorber, and the efficiency of the absorber in recovering gasoline. To do this we first worked out a formula which would theoretically express this relation, secured as much data as possible on the actual performance of absorbers, checked the data against the formula, and finally arrived at a modified formula which we believe adequately represents the performance investigated.

Theory of Absorption

Since the absorption of gasoline in oil is a solution process we would naturally look to the law of perfect solutions or Raoult's Law for the basis of our formula. This law states that the partial pressure of any component in a perfect solution is equal to the product of its mol fraction in the solution times the pressure it would exert at the same temperature in a pure state.

If we call the mol fractions x_1 x_2, x_3, and in general x_n, for methane, ethane, propane and in general component "n" respectively, and the pressures of the pure components p_1, p_2, p_3, and p_n respectively, the partial pressures will be x_1p_1 x_2p_2—x_np_n. These are the partial pressures in the liquid. In the gas the partial pressures are divided in accordance with Dalton's law, if P is the total or working pressure (absolute), and y_1, y_2, y_3, etc., represent the composition of the gas (by volume), then the partial pressures in the gas are, y_1P, y_2P—y_nP. If the liquid is in perfect equilibrium with the gas, the partial pressures are equal for each component, or $x_1p_1=y_1P$, $x_2p_2=y_2P$ or in general $x_np_n=y_nP$—(1).

By definition, $x_n=L_n/L$ and $y_n=V_n/V$ where L_n and V_n are the number of mols of component "n" in the liquid and gas respectively, and L and V are the total mols of liquid and gas. Substituting these values in Equation 1, we have,

$$\frac{L_nP_n}{L} = \frac{V_nP}{V}$$

Multiplying both sides of this equation by L/V_np_n, it becomes

$$\frac{L_n}{V_n} = \frac{L\,P}{V\,P_n} \quad —(2)$$

This is a very useful equation, and applies to any process where the total liquid plus vapor is constant throughout and the two are in equilibrium—such as flash distillation and most cases of condensation.

In the case of absorption we know P, the total pressure, and can obtain P_n, the vapor pressure of each component, from the working temperature and a table or chart. Then if we know L/V or the ratio of total liquid to total vapor, we can calculate L_n/V_n for each component. We are not particularly concerned with this ratio at different trays, but we are vitally concerned with it at the bottom of the absorber. If we had a perfect absorber, the wet gas entering and the fat oil leaving the absorber would be in exact equilibrium and L_n/V_n would be the recovery ratio for each component. For example, if L_3/V_3 were found to be 0.3 for propane, it would indicate that for every ten mols of propane in the wet gas there would be only three mols in the fat oil, hence we would be recovering .3 or 30 per cent of the propane. In the same way we may calculate the recovery fraction for each component, merely substituting in the formula the proper value of p_n. If the value of this fraction is greater than unity, as in general it will be for pentane and heavier, it merely means that the oil circulated could not be saturated with this component at the given temperature and pressure.

*Paper presented at meeting of California Natural Gasoline Association.

Working Formula

To render this a convenient working formula, it is necessary to translate L/V into terms of oil to gas ratio. This ratio is expressed as gallons of lean absorbent oil per 1,000 cubic feet of wet gas. Calling this R_o, the weight would be 8.33 R_o G_o where G_o is the specific gravity of the oil, and since a mol is m pounds where "m" is the molecular weight of a substance, the mols of absorbent oil would be $8.33\ R_oG_o/m_o$. If we call the gasoline absorbed "A" in gallons per thousand cubic feet, this would be $8.33\ A\ G_a/m_a$ in mols. Hence $L= 8.33\ R_o\ G_o/m_o+8.33\ A\ G_a/m_a$. The mols of gas in 1,000 cubic feet are obtained from Avogadro's law, namely that the densities of all gases at a given temperature and pressure are proportional to their molecular weights. Hence, at the same temperature and pressure a mol of gas is a constant volume. At 60 degrees Fahrenheit and atmospheric pressure this constant is approximately 379 cubic feet or $V=1,000/379=2.4$ mols. Hence, $L/V=(8.33\ R_oG_o/m_o+8.33\ AG_a/m_a)/2.4 =3.153\ (R_oG_o/m_o+A\ G_a/m_a)$. If we call the recovery fractions F_1 F_2, F_3, etc., the formula becomes,

$$F_n=3.153\ (R_oG_o/m_o+A\ G_a/m_a)\ P/p_n \quad —(3).$$

To calculate the total absorption term AG_a/m_a, three methods are offered.

(1) Where wet and dry gas tests are available. Here the method is comparatively simple. Since the proportion of methane absorbed is practically negligible, we may assume that there is the same amount of methane in the dry gas as in the wet gas. If we call the total wet gas W, the total dry gas D, the methane analyses, W_1 and D_1, and the total absorption in cubic feet A_o, the latter is the shrinkage or $A_o=W—D$. The methane in the wet gas is W_1 W and in the dry gas D_1D. Equating these, combining the two equations and solving for A_o, we have,

$$A_o=\frac{(D_1—W_1)W}{D_1} \text{ or for } W=1,000 \text{ cu. ft.}$$

$$A_o=\frac{1000(D^1—W_1)}{D_1} \quad —(4)$$

To expess this in terms of gallons per thousand, we have,

$$A_o=\frac{8.33\ A\ G_a}{m_a}\times 379 \text{ or } \frac{AG_a}{m_a}=\frac{A_o}{3,160}$$

Substituting in Eq. 4.

$$\frac{AG_a}{m_a}=\frac{.316(D_1—W_1)}{D_1} \quad —(5)$$

(2) Where no analyses are available we may assume that the vapor pressure of the total absorption is approximately that of propane. The empirical equation would be,

$$\frac{AG_a}{m_a}=C\,\frac{R_oG_o}{m_o}\,\frac{P}{p_3} \quad —(6)$$

Using the data in Tables 1 and 3, and calculating C, the mean value was found to be .323. This is probably accurate enough for estimating.

(3) Ordinarily R_oG_o/m_o is 8 or 10 times as large as AG_a/m_a, hence, a small error in estimating the latter does not greatly affect the result. If we assume a constant ratio between the two, the general formula is considerably simplified. The mean value of R_oG_o/m_o for all tests was 0.1716 and the mean for AG_a/m_a was 0.0216 or

$$AG_a/m_a=0.126\ R_oG_o/m_o \quad (7)$$

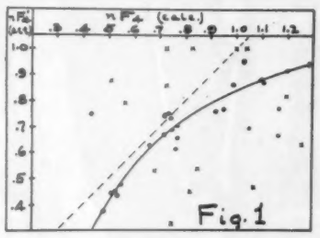
Substituting this value in Equation 3, we have

$$F_n=\frac{3.55\ R_oG_oP}{m_op_n} \quad —(8)$$

We believe this formula is sufficiently accurate for the usual temperatures and pressures. For extreme cases, Equation 6 is preferable.

Absorption Tests and Calculations

A questionnaire was sent out to the principal companies operating absorption plants, asking for the data covered in Tables 1 and 2. They respond very generously and 45 tests were reported. Two of these, Nos. 35 and 36, could not be used for testing the formula, since gas analyses were not included. They are listed, however, to show oil rates in use at high pressures. Two other cases, Nos. 14 and 16, are omitted as being quite unreliable. In eight other cases, the wet and dry gas analyses are inconsistent, in as much as more of one component, after allowing for shrinkage, is shown in the dry gas than in the wet, which, of course, is impossible. This tends to throw doubt upon the analyses of the other components. Other tests are questionable on account of the extremely high total absorption indicated by the methane analyses, without a corresponding rise in temperature of the oil. All of the tests concerning which there is any question have been marked with an interrogation point in Table 3. Many of these, however, plot quite consistently for the most important components, normal butane and pentane plus, while many others in which there is no definite inconsistency in the analyses may be equally in error. The point we wish to make is that complete agreement between actual and calculated recovery must not be expected. The best we can hope for from the present data is a general average. We have no reason to question the accuracy of the analyses, but believe the inconsistencies shown are due to the methods of sampling. We know that the composition of a gas is constantly changing. Even if samples are taken simultaneously, if a change is taking place or has just taken place in the gas, the samples will not be representative since it takes some time for the oil to reach equilibrium with the changed gas. In this connection, we would strongly suggest the advisability of installing sampling tanks in which composite samples are collected over a period of three or four hours, or even for the whole 24 hours.



Explanation of Tables

Table 1 shows the principal data, and, in general, is self-explanatory. In the column headed m_o/G_o, values of molecular weight were used as furnished. Where no value was given in the report, we used that corresponding to the nearest gravity of some tested oils.

Table 2 gives the wet and dry gas analyses as reported and Table 3 the calculated results. In the second column AG_a/m_a was calculated as follows: Since Equation 5 gave values which seemed extreme in many cases this term was calculated by both Equations 5 and 6 and the mean of the results taken. The next three columns are the calculated recovery for propane, isobutane and normal butane. These were calculated from Eq. 3 and indicate what would be recovered with a perfect tower and 100 per cent equilibrium. In the next three columns are listed the actual recovery of these three fractions, which are calculated as follows: Since the analysis of the dry gas is so many cubic feet of each fraction per 100 cubic feet of dry gas this does not correspond to 100 cubic feet of wet gas but must be adjusted to the same basis, as follows: Calling the actual fraction recovered F_{1a} to distinguish it from the calculated value F_n, we have

$$F_{1a}=\frac{W_n—D_n\frac{W_1}{D_1}}{W_n}$$

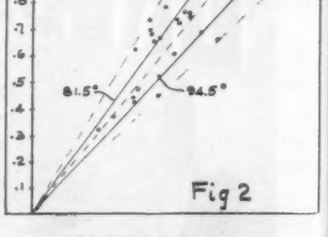
This may be demonstrated by taking a case—Test No. 1. Assuming the methane absorption is negligible, total wet gas is to total dry gas as 92.1:85.3, or for each 100 cubic feet of wet gas we have $100\times 85.3/92.1=92.6$ cubic feet of dry gas. The dry gas analysis of propane is 4.50 per cent; 4.50 per cent of 92.6=4.16. The wet gas analysis of propane is 6.80 per cent. Hence, for each 100 cubic feet of wet gas we had 6.8 cubic feet of propane and this shrunk to 4.16 cubic feet, or 2.64 cubic feet was absorbed. The fraction recovered was 2.64/6.80=.388 or 38.8 per cent.

The next three columns are obtained by dividing the actual fraction absorbed by the calculated fraction and represent the absorption efficiencies, or more strictly, the degree of equilibrium established between incoming gas and outgoing oil. This is quite different for each component and, hence, cannot in general be called "absorber efficiency."

Averaged Results

The tables are far too long to read off but each column has been averaged with the following results:

The typical lean oil is 40 degrees A.P.I., has a molecular weight of 187, a saturation of 1¾ per cent at 375 degrees Fahrenheit and a vapor pressure of 27 m.m. at 80 degrees Fahrenheit. The average working pressure is 70 pounds gauge. The oil enters at 72.4 degrees and leaves at 88.6 degrees, or the mean rise is 16.2 degrees Fahrenheit. The oil to gas ratio is 38.8 gallons per 1,000 cubic feet. The shell velocity is 28.5 feet per minute corrected to the bottom oil temperature. The average gas analyses are:



	Wet gas	Dry gas
Methane	79.80%	85.90%
Ethane	6.48	6.31
Propane	6.22	7.74
Isobutane	1.35	0.78
Normal butane	2.33	0.69
Pentane plus	2.97	0.16

(Continued on Page 97)

Dubbs Cracked Gasoline is a good blending material to produce a suitable anti-knock gasoline where you need to blend to get rid of your refinery straight run

The quality of the blend depends on the proportion of Cracked Gasoline used

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

WARNS GASOLINE TAX CONFERENCE THERE'S LIMIT TO POPULAR PATIENCE

By Frank E. Packard
General and Tax Attorney, Standard Oil Co. of Indiana, Chicago, Ill.*

"The time will come," said a member of Congress during the historic debate on the adoption of Hamilton's proposed system of indirect taxation in 1790, "when the poor man will not be able to wash his shirt without paying a tax."

Prophetic words!

Indirect taxation was invented to secure revenue from privileged classes who were too proud to pay tribute to prince or king. The revenue was secured and the overlord was too ignorant to understand that he paid the lions share of the bill. The medieval nobleman had nothing on the modern taxpayer, who, enshrouded in impenetrable ignorance, fusses about profiteering while being fleeced by indirect taxation.

With the advent of democracy the forced contribution of the citizen to the support of the state was recognized, and the privileges and prerogatives of the monarch and upper classes were abolished, and prorated obligations for the support of the state were recognized.

The abuse of indirect taxation has always been a prime factor in the overthrow of monarchical or oligarchical forms of government. It was the occasion, if not primary cause, of the American and French Revolutions. In this country indirect taxes angered the people of the colonies. Under the government of the Continental Congress and the Articles of Confederation, such a thing as an indirect tax was taboo. After the adoption of the Constitution only the fame and austere character of Washington and the great genius of Hamilton secured the passage by Congress of a very limited system of excises. Even these light burdens were met by rebellion which had to be put down by armed force. During the great struggle between the states, the northern government resorted to a considerable range of excise taxation. These grew and flourished until sometime after the war and were doubtless contributing factors in the governmental corruption, which for a decade makes American history unpleasant reading.

The displacement of the indirect tax by the direct tax, has been the tendency, but in recent years the phenomena has arisen of a burdensome indirect tax being superimposed upon an already very heavy burden of direct taxation.

During the past 25 years, and most notably since the World War, the demand on the part of the people for governmental activity has resulted in general property and income tax burdens which have become galling, and politicians discerning the sign of rebellion on the part of the taxpayers, and deeming it wise politics to continue these activities which the people demand but are not willing to pay for by direct contribution, have resorted to indirect taxation. Not only have values for the purpose of property taxation increased sharply during this period, but rates have mounted with even greater acceleration. This is most notably true of the last decade. In addition there is a distinct and widespread tendency on the part of the states and their subdivisions to levy business and occupation taxes and even invoke the police powers for the purpose of raising revenue. These burdens have increased so rapidly that the oil industry, for instance, is paying to the states today in such excises an amount many times greater than the direct burden upon their property.

Startling Comparison

It is my belief that within a short time, apart from the gasoline sales tax,

(Continued on Page 152)

*Before North American Gasoline Tax Conference, Detroit.

High Spots in Field News

NORTH TEXAS AND PANHANDLE

Gray County boosts Panhandle production to new peak of 113,643 bbls. Phillips Petroleum Co.'s well estimated 15,000 bbls.; well of The Texas Company flowing 7,956 bbls.

Deepening of well of The Texas Company which had fallen to 20 bbls. tapped second pay producing 1,445 bbls. Deepening in Wilbarger County increased a well from 8 to 75 bbls. and other deepening operations are being encouraged.

GULF COAST

Barbers Hill production up to 15,000 bbls. Humble deep horizon is most promising on coast.

New deep sand opened at Anse La Butte, St. Martin Parish, Louisiana, by Yount Lee company well, flowing 1,000 bbls. 32.5 gravity oil.

Yount Lee company well at Barbers Hill is flowing at rate of 2,585 bbls. through one-half inch choke.

OKLAHOMA

Gypsy company well in Pottawatomie County, western part of St. Louis Pool, is estimated 6,000 bbls.

Operators in Oklahoma City Pool have no desire to build storage and will keep production to pipe line capacity which will soon increase.

NORTH LOUISIANA-ARKANSAS

Cotton Valley operators get production from new level. New crater complicates work in Richland Parish. Wild well in Monroe Field burning.

ROCKY MOUNTAIN AREA

Lea County, New Mexico, well higher on structure, missed Skelly pay, but will drill deeper. New black oil field northwest of Casper, Wyo.

WEST TEXAS

Important wildcat in Fisher County has good showing 4 miles from production. Renews interest in Jones and Stonewall Counties.

CALIFORNIA

California may need new storage unless production is reduced. Gas conservation law to be initiated about September 10-15.

KANSAS

Sedgwick County pools hit new peak—41,243 bbls. New wildcats started in several counties. Chief interest in west.

SOUTHWEST TEXAS

New Edwards lime area in Guadalupe County calls renewed attention to Balcones Fault possibilities.

Late News from the Field

OKLAHOMA

Gypsy Oil Co.'s No. 3 Green, NE cor. SE, Section 17-7-4, Pottawatomie County, which is in the western part of the St. Louis Pool, is estimated to be a 6,000-bbl. well, from the Hunton lime at 3,610-97 feet. On Monday morning's gauge it was making 240 bbls. an hour. The owners saved 3,100 bbls. and the balance, which was estimated to be 3,000 bbls., was lost, in the first 24 hours. The test blew in unexpectedly Saturday night, August 10, with not enough tankage to handle so large a well. The two other wells on this lease were small producers. The gauge on Tuesday morning was 4,965 bbls., the second 24 hours.

The Sun-Ray Oil Co. has announced a new location in the Beebe district, in the NW cor. SE Section 25-5-5, Beebe district, Pontotoc County.

Oklahoma City Pool reached a new peak in production on Sunday's gauge, August 11, when the 10 producing wells gauged 36,071 bbls. The Indian Territory Illuminating Oil Co. has 17,958 bbls. from five producing wells, which is over half of the total production of entire field.

Mid-Kansas Oil & Gas Co.'s No. 1 Trosper, NE cor. NW Section 19-12-1w, Oklahoma County, is drilling in lime at 6,612 feet, after topping the lime at 6,560 feet. This test is northeast of the producing field and is drilling below the depth where the oil pay is found in the main part of the field.

The Shell Petroleum Corp.'s No. 2 Petty, in the SW cor. NE Section 30-11-2w, Oklahoma County, made one flow of 60 bbls. of oil from the lime pay at 6,483 feet. It is the eleventh producing well in the field.

The gauge of the Oklahoma City Field on Tuesday, August 13, was 33,121 bbls. from 11 wells, a decline of 2,950 bbls. from the peak on Sunday.

KANSAS

McPherson Oil & Gas Co.'s No. 1 Chindberg, C NW NW, Section 18-19-2w, McPherson County, which was showing for a producer in chat, has picked up water and will be drilled deeper. The test found chat at 2,992-3,040 feet, where it made 2,500,000 feet of gas and 20 bbls. of oil, the last 5 feet showing water. Six-inch casing will be landed at 3,040 feet and the test drilled to the deeper horizons.

Johnson and others' No. 1 Roy, NE cor. NW SW, Section 23-29-1w, Sedgwick County, has the top of the chat at 3,342 feet, with the 6-inch casing landed at 3,317 feet. It will drill ahead into the pay horizon. The test is being watched by oil operators and is considered a favorable prospect for the southern part of the county.

Byrens and others' No. 1 Fisher, NE cor. SE, Section 4-11-20w, Ellis County, is spudding. This wildcat test is located in the center of a 20,000-acre block of leases in the extreme northwestern part of the county, and 20 miles from any other production.

Tom Slick Oil Co. and others' two tests in Harper County, are being watched; these wells have reached an interesting depth and are expected to reach the pay horizon in the next few days. No. 1 Miller, in the SE cor., Section 13-34-8w, is coring ahead at 4,450 feet with nothing showing. No. 1 Thompson, in the NW cor., Section 10-32-6w, has standardized at 4,600 feet and is rigging up to drill ahead.

GULF COAST

HOUSTON, Tex., Aug. 13.—A new deep sand was opened at Anse La Butte, St. Martin Parish, Louisiana, when the Yount Lee Oil Co.'s No. 4 Louisiana Petroleum Co. was completed flowing 1,000 bbls. daily from a sand at 3,624 feet. The oil tests 32.5 gravity.

Anse La Butte is one of the oldest domes on the Gulf Coast but never has been much of a success productively although in its early days, in 1905, it had some large wells. These were short lived and for years it had been producing only from 45 to 50 bbls. daily from a few small shallow pumpers.

Yount Lee Oil Co. today again boosted the daily output of Barbers Hill when it completed its No. 7 Chambers on the south side of the dome, flowing at the rate of 2,585 bbls. daily through a half-inch choke. The oil tests 30.8 gravity and is from a sand at a total depth of 5,302 feet.

Humble Oil & Refining Co.'s No. 5 Hamner fee, DeWalt, has been completed flowing 1,200 bbls. of pipe line oil from a sand at 3,624 feet, and Rex Petroleum Co. brought in its No. 10 Hunter at Edgerly, La., flowing 1,500 bbls. daily at 4,296 feet. Benedum & Trees' No.

(Continued on Page 153)

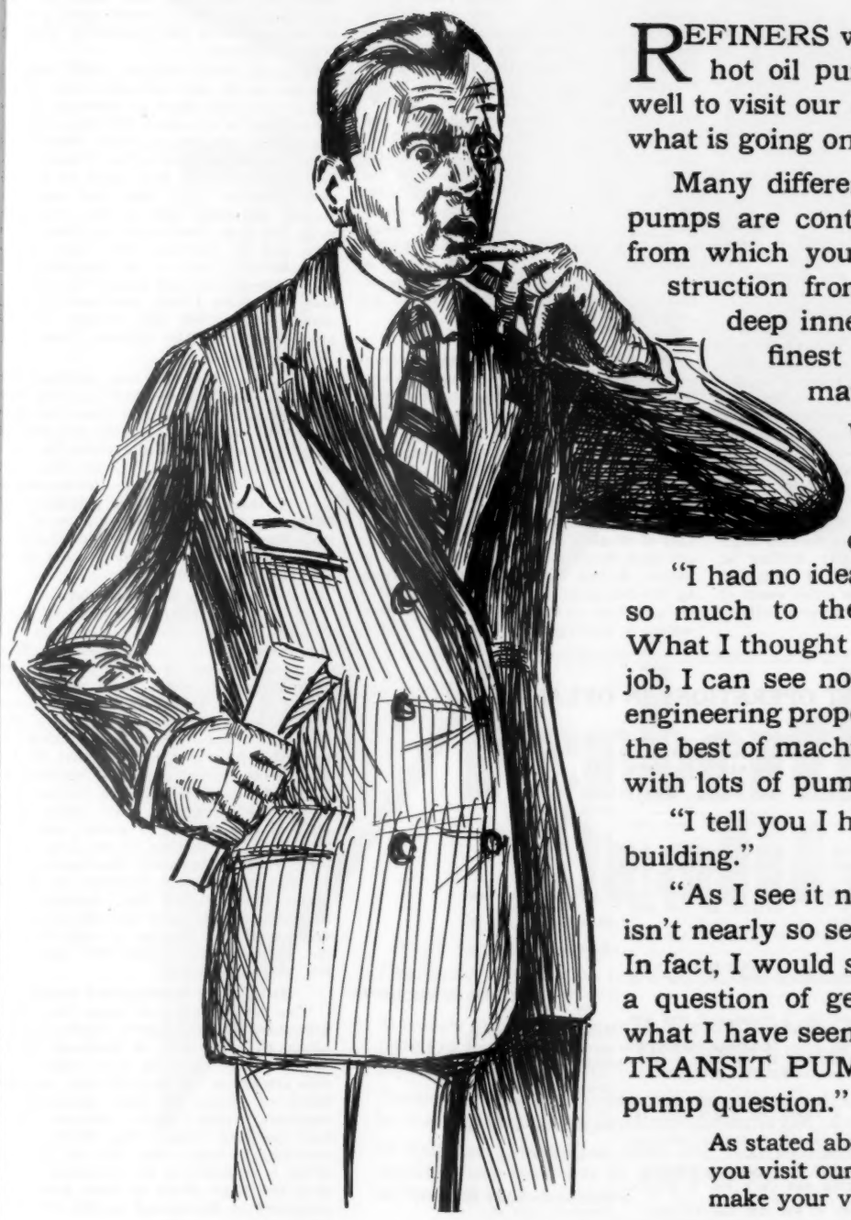
A.P.I. WEEKLY REFINERY STATISTICS

NEW YORK, Aug. 13.—The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks—for the week ending August 10 follows:

	(1)	(2)	(3)	(4)
East Coast	100.0	3,569,100	4,843,000	10,847,000
Appalachian	85.5	582,400	930,000	1,099,000
Indiana, Illinois, Kentucky	98.7	2,142,000	5,767,000	3,697,000
Oklahoma, Kansas, Missouri	70.7	1,760,900	2,914,000	4,618,000
Texas	87.0	3,665,800	4,045,000	12,260,000
Louisiana and Arkansas	92.0	1,201,600	1,648,000	5,214,000
Rocky Mountain	93.2	455,600	1,590,000	682,000
California	98.7	4,940,100	11,834,000	105,097,000
Total United States	91.9	18,297,500	33,571,000	143,514,000
Texas Gulf Coast	99.3	2,828,400	3,397,000	9,392,000
Louisiana Gulf Coast	100.0	892,400	1,390,000	4,368,000

(1) Per cent refinery capacity represented. (2) Crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.

"I Had No Idea"



REFINERS who want to get all the facts on the hot oil pump question, we believe would do well to visit our shop and see with their own eyes what is going on in the Hot Oil Pump Department.

Many different types of reciprocating hot oil pumps are continually going through the works, from which you can get a good idea of the construction from the ground up, and also of the deep inner excellence made possible by the finest of machine work on the best of materials.

We got the idea for this invitation from a man away up in refining circles who was investigating hot oil pumps here.

"I had no idea," said this man, "that there was so much to the manufacture of hot oil pumps. What I thought was a very simple pump building job, I can see now, for the first time, is strictly an engineering proposition that must be backed up with the best of machine tools and the best of workmen, with lots of pump building experience thrown in."

"I tell you I have had my eyes opened, on pump building."

"As I see it now, the selection of hot oil pumps isn't nearly so serious as many refiners think it is. In fact, I would say it is quite simple. It is merely a question of getting the right pumps, and from what I have seen in the last two days, I believe that TRANSIT PUMPS are the answer to the hot oil pump question."

As stated above, we would be pleased to have you visit our works. We will do all we can to make your visit both pleasant and instructive.

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Tulsa, Okla., or any store.

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Los Angeles, California

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Salt Lake City, Utah.

REEVES & SKINNER MACHINERY CO.
St. Louis, Mo.

Will Limit Oklahoma City Production

Operators Have No Desire to Build Storage and Will Keep Production to Pipe Line Capacity, Which Will Soon Increase

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

Another producer has been added to the Oklahoma City Field making the twelfth producer in the district. The producing field which is south of the capital city reached a new peak in production on Saturday's gauge when the 12 wells made 35,497 bbls. The latest well is owned by the Indian Territory Illuminating Oil Co. and is No. 1 S. Bodine, NW cor., Section 30-11-2w, Oklahoma County. It made 3,486 bbls. the first 18 hours and 5 minutes, from the pay horizon at 6,473-75 feet. The oil tests only 31.5 gravity at 78 degrees. It made 7,500,000 feet of gas. It is the lowest gravity oil yet found in the field.

At a meeting of the operators last Friday when proration was discussed it was agreed that the production would be limited to the pipe line capacity at all times and that no storage tank building program would be started. Two pipe lines are running oil in the field now and several others are surveying and buying rights of way and intend to enter the area in a short time. Oklahoma Pipe Line Co., Sinclair Pipe Line Co., and the Texas Pipe Line Co. of Oklahoma are all planning to enter the field, each with an 8-inch line which will increase the pipe line capacity 60,000 bbls. The five pipe lines would give the field a total capacity of around 100,000 bbls. a day, and many express the opinion that the field will be making that much in a few months.

Mudding Off Gasoline Wells

Since the State Corporation Commission ordered the two "gasoline" wells shut in these tests are mudding off the gas and rigging up to drill deeper. The Indian Territory Illuminating Oil Co. and others' No. 1 Watters, in the NE cor. NW NE, Section 25-11-3w, is attempting to mud off 147,000,000 feet of gas at a total depth of 6,249 feet, and is moving in rotary rig and tools to drill to the deeper pay horizon. This well produced more than 3,000 bbls. of gasoline per day for several days before being shut in. The other gasoline well owned by the Sinclair Oil & Gas Co. and Amerada Petroleum Corp., No. 1 Kinter, in the NW cor. SE, Section 30-11-2w, is lubricating the hole while trying to mud off the gas which tests 70,000,000 feet from a total depth of 6,192 feet. This test made as high as 2,000 bbls. of gasoline a day. One of the older gas wells in the field is the Indian Territory Illuminating Oil Co.'s No. 1 Trosper, in the C NE SW, Section 13-11-3w, in which the gas was mudded off and drilling resumed at 6,188 feet.

Oklahoma production has reached a point where the large crude oil buyers are selecting connections, while only a short time ago they were soliciting the owners of all new wells for connections.

90 Operations Under Way

In the Oklahoma City area 90 operations are under way and new locations are being made almost every day. Some express an opinion that the operators in this district are drilling these deep tests too close to one another. It seems reasonable under present production conditions to drill one well on each 40 acres while the operators in the field are spacing the wells on 10-acre locations. How much recovery per acre the field will eventually make is anybody's guess. Three new wells expect to reach the pay sand this week. The Indian Territory Illuminating Oil Co.'s No. 1 Bodine, NW cor., Section 30-11-2w, Oklahoma County, was drilling out cement plugs at a total depth of 6,473 feet. The same company's No. 2 A. Bodine, in the SW cor. NE SE, Section 24-11-3w, Oklahoma County, is drilling out cement plug at a total depth of 6,536 feet. Shell Petroleum Corp.'s No. 2 Petty, SW cor. NE, Section 30-11-2w, was drilling cement plug and bailing and swabbing in an effort to clean out the hole. It was showing about 40 bbls. a day.

The gauge of the field by companies on August 9 was as follows:

Company—	Bbls.
Coline, No. 1 Olds	4,096
I. T. I. O., No. 1 Button	5,213
I. T. I. O., No. 1 Johnson	2,819
I. T. I. O., No. 1 Henning	3,389
I. T. I. O., No. 1 fee	1,684
Mid-Kansas, No. 1 Fortson	3,776
Mid-Kansas, No. 2 Fortson	4,173
Prairie, No. 1 Hiddleston	3,250
Sinclair, No. 1 Stamper	3,020
Total	31,420

The production of the field is slowly declining. New producers are expected to boost it to new high levels in the near future.

Sinclair Oil & Gas Co. has announced three new locations in the Oklahoma City Field. One is three-fourths of a mile from production and is located in the NE cor. Section 36-11-3w, Oklahoma County, on school land; another is No. 4 Stamper, in the NW SW NW Section 30-11-2w, Oklahoma County, and the third is No. 2 Kinter, SW cor. SE Section 30-11-2w.

The Prairie Oil & Gas Co., Tom Slick Oil Co. and Phillips Petroleum Co.'s No. 1 Sudik, in the C NE NE Section 8-10-2w, Cleveland County, was drilling at 7,008 feet with 5,000 feet of water in the hole. It is only a few miles south of the main pool and is the deepest drilling test in the area.

Apparently water is increasing in the Magnolia Petroleum Co.'s No. 1 Decker, SE cor. SW SE Section 8-14-4, Lincoln County. The well is producing from the Simpson lime at 4,553-72 feet. It made 588 bbls. on August 9 and 424 bbls. on August 10 and was cutting 7 per cent. Several oil operators are purchasing leases in the surrounding area and these leases are bringing big bonuses. Tom Slick Oil Co. purchased the SW NW Section 20-14-4; the NW Section 21-14-4; 115 acres in the NW Section 22-14-4; 105 acres in the NE Section 24-14-4, and 95 acres out of the NW Section 10-14-4, all in Lincoln County. The Prairie Oil & Gas Co. purchased 100 acres in the NW of Section 15-14-4. Mid-Continent Petroleum Corp. has purchased the W half NE Section 20-14-4, Lincoln County.

Frank Billingslea and the Reiter-Foster Oil Corp. are starting a wildcat test in the SE cor. NE Section 28-17-6, Lincoln County. Operations are expected to get under way in a few weeks.

Asher Townsite

The Asher Pool in Pottawatomie County shows a decline this week of about 300 bbls. a day. The townsite will have at least two wells on each block providing the wells are big enough to warrant the cost. The town council has placed a tax of $100 on each location, and there is no limit on the number of wells that may be drilled in each block. The only test drilling in the townsite at this time is that of Stogner and others. All the others are shut down because of a shortage of water. A new rig is under construction by the Oklahoma Crude Oil Co. in Block 65, an offset to the Texola Oil Co.'s well which is making about 250 bbls. a day. Obermeyer and others in Block 51 is rigged up and waiting for water. The Shaffer Oil & Refining Co.'s No. 1 Murphy, NW cor. NE Section 11-6-3, Pottawatomie County, is bailing the hole at a total depth of 3,940 feet. It is expected to reach the pay sand in the next few days. If it should make a well it would extend the producing area 2 miles northwest.

Seminole Field averaged 2,995 bbls. a day less in the past calendar week. Only two of the pools show an increase, Little River Pool is up about 700 bbls., mostly due to the completion of the Mid-Continent Petroleum Corp.'s No. 7 Smith, in Section 5-7-7. This well made an initial production of 3,470 bbls. and was the largest completed well in the area this week. Searight Pool is also up about 750 bbls. over the previous week, most of the increase being due to the completion of the Carter Oil Co. and others' No. 1 Mayhue, in Section 11-9-6, Seminole County, which made 1,400 bbls. a day, and is producing from the Hunton lime and Wilcox sand.

St. Louis Pool has been slipping for some time and has declined to a new low in production. The gauge from the 400 completed wells in that pool was 68,366 bbls. on August 8. While about 50 tests are drilling in the St. Louis area and mostly in Township 7-4, Pottawatomie County, there is very little possibility of increasing the production as most of the wells are small and the area around Sections 16-17-7-4 has been practically proven up by light wells.

Sasakwa Still Doubtful

The Sasakwa Pool in Seminole County is still in the doubtful stage. Most of the production is coming from the Wilcox sand horizon which has proved to be near the water level. Some predict the field will have wells with large flush production but it is expected this area will be more or less spotted. Section 13-6-7 is the most favorable looking part of the pool at the present time. The Sinclair Oil & Gas Co.'s Davis lense, in Section 7-6-8, on which are four wells, made 5,941 bbls. on the August 9 gauge, and four other tests are drilling on the same property. Indian Territory Illuminating Oil Co. has made a new location for No. 1 Davis, SW cor. NW SW, Section 8-6-8, Seminole County, and the Magnolia Petroleum Co. is digging a cellar for its No. 1 Diament, NE NW SW, Section 8-6-8, Seminole County.

Blocking in Southeastern Grant

Two large blocks of leases have been assembled in southeastern Grant County, about 15 miles west of Tonkawa. Wildcat tests are expected to be started on this acreage in the next 60 days. Another block of leases has been assembled in northern Noble County, between Perry and the Kay County line. Work of assembling a block near the old Billings Field is expected to be completed in the next few days. Tests on these blocks are supposed to be started within the next 90 days.

In Southern Oklahoma

Southern Oklahoma has not been very active during the past week but this large area is expected to be thoroughly tested when the oil industry is in need of more flush production. Fred Coogan and others' No. 1 Holmesburg, in the SE cor. NW, Section 35-9-25w, Beckham County, which is in the extreme western part of the county and near the Texas state line is drilling at 2,810 feet in granite wash which was found at 2,728 feet. The hole has 300 feet of water in it from this formation. It is the opinion of some geologists that this test has

(Continued on Page 76)

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Bros.' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Drlg. 1,250 ft.
Washoma Oil Co.'s No. 1 Acre, SW cor. NE Sec. 14-24-11w	Rig.

BECKHAM COUNTY

Kay and others' No. 1 Martin, C E half E half NW Sec. 32-8-24w	Rig.
F. Coogan's No. 2 Holmesburg, SE NW Sec. 35-9-25w	2,700 ft.; 5-in. csg.
Producers Exploration Co.'s No. 1 Seidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Carson and others' No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Shut down 1,547 ft.

BLAINE COUNTY

Lowen and others' No. 1 Unknown, NW cor. SW NW Sec. 27-16-11w	Spudded and shut down; renewing leases.
Washoma Oil Co. and others' No. 1 Phillips, C NW SW Sec. 13-19-10w	Shut down 2,200 ft.

CADDO COUNTY

Abernathy & Brown's No. 1 Horton, SE cor. Sec. 8-6-13w	Shut down 535 ft.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CLEVELAND COUNTY

Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.
Phillips Pet. and T. B. Slick's No. 1 Sudick, NE cor. NE Sec. 8-10-2w	Drlg. 6,990 ft.

COAL COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 Harris, SE NE Sec. 10-1-11e	Shut down 1,975 ft.
W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e	Fishing 1,585 ft.
Indian Territory Illuminating Oil Co.'s No. 1 Cook, SW cor. NW Sec. 10-1-11	Drlg. 7,850 ft.
J. S. Cosden's No. 1 Richardson, NW cor. NE NE Sec. 6-2-8	Drlg. 2,218 ft.
McGinley & Sigler's No. 1 Willsey, NW cor. SE SE Sec. 7-2-8	Drlg. 2,170 ft.
E. W. Whitney's No. 1 Brown, C SE NE Sec. 10-2-8	Shut down 202 ft.

COMANCHE COUNTY

Muse et al's No. 1 Cross, NW SW SW Sec. 4-1-9w	Shut down 2,027 ft.
Green and others' No. 1 Wilson, C NE SW Sec. 14-1-12w	Shut down 4,055 ft.

CREEK COUNTY

Shaffer et al's No. 1 Moore, SW SE SE Sec. 2-18-9	Drlg. 2,550 ft.

CUSTER COUNTY

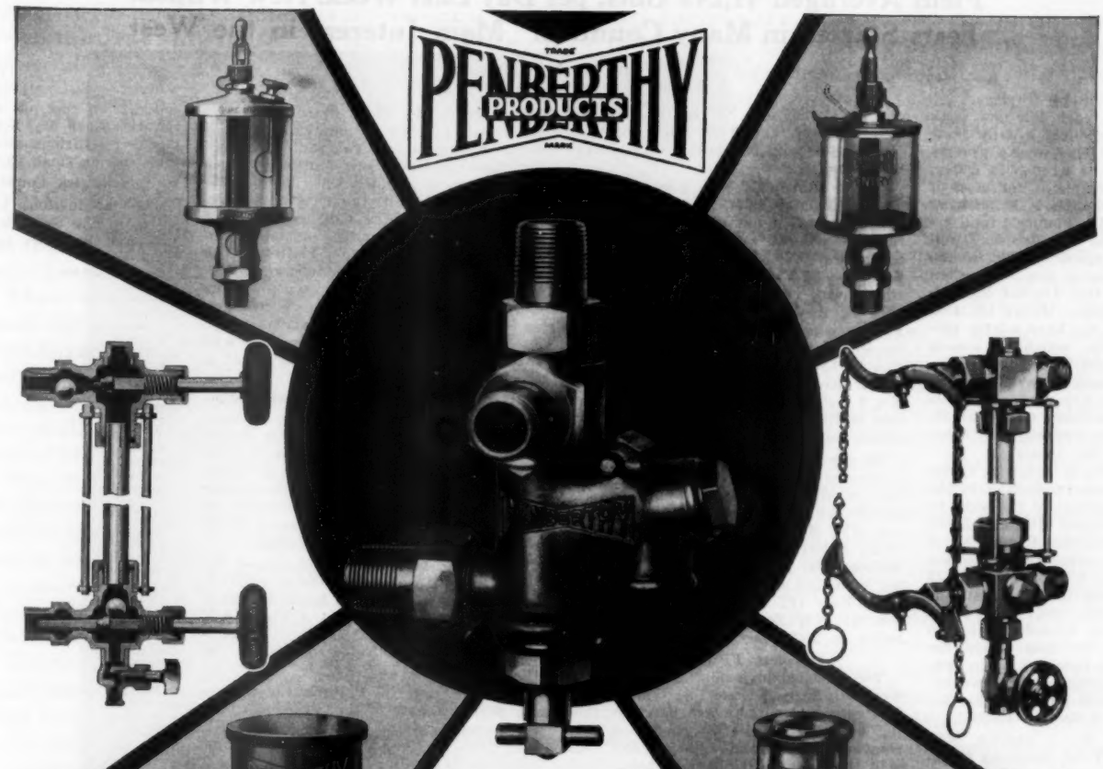
W. E. Witt's No. 1 Wellman, C SE Sec. 1-14-14w	Rig and tools.

GARFIELD COUNTY

E. L. Love and others' No. 1 White, SE cor. NW Sec. 9-24-6w	Shut down 5,566 ft.

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w	Spudded and shut down.
J. M. Henry and others' No. 1 Abraham, SE cor. NW Sec. 4-5-8w	Rig.



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Sedgwick County Pools Hit New Peak

Field Averaged 41,243 Bbls. per Day Last Week. New Wildcat Tests Started in Many Counties. Main Interest in the West

By W. A. Spinney
Staff Correspondent, Kansas Fields

Sedgwick County reached a new peak last week when it produced a daily average of 41,243 bbls. This week's production shows a decline of 4,166 bbls. a day. Only one well was completed and most of the production in the pools is showing a natural decline. The county's total recovery from the time the discovery well was drilled in on August 8, 1928, to the same date one year later was better than 5,000,000 bbls. Of this amount the Bu-Vi-Bar Petroleum Corp., Gypsy Oil Co., and Continental Oil Co. have jointly produced 2,989,611 bbls. which is almost two-thirds of the total. The above companies drilled the discovery well and that lease which now has five producing wells has made a total recovery to August 8, 1929, of 804,698 bbls. and leads all other producing leases in the county.

Greenwich Townsite in Sedgwick County, is still adding new production to the county. The total output of the wells in the townsite on August 10 was 3,125 bbls. The Shell Petroleum Corp.'s No. 3 Community, in the townsite in Section 15-26-2, had the pay horizon at 2,920-21 feet, and by swabbing it made 134 bbls. in eight hours. This well makes the sixth producer in the townsite which so far has not had a dry hole within the city limits. Graham Brothers made locations for two new tests in the townsite, one for No. 1 Schaerer and the other for No. 1 Baker, both in Section 15-26-2.

Miller & Wentz' No. 1 Shaffer, NW cor. NE, Section 9-27-2w, Sedgwick County, west of Wichita, had a small showing of oil in the Simpson lime at 4,012-24 feet, which will be given a production test.

South of the Robbins Pool in Sedgwick County, Sullivan and others' No. 1 Woodford, NE cor. NW, Section 29-28-1, found a show of oil in chat at 3,126-40 feet. The casing is being underreamed to the top of the chat and a test will be made.

Butler County is still holding the interest of oil operators. Seven new locations were made in Butler County this week. This county has been a huge oil reservoir and has had the largest wells in the State in its borders. The recent completion of the Aladdin Petroleum Corp.'s No. 1 Bronsinger, NE cor. SW, Section 24-27-3, Butler County is making 134 bbls. daily from the Viola lime at 3,010-20 feet. It is a new pay horizon for that part of the county, and has resulted in two new locations which were made this week. One by the Aladdin Petroleum Corp. in the SE cor. NW, Section 24-27-3. The other 2 miles west by E. W. Marland, Inc., in the SW cor. NW, Section 22-27-3.

Cowley County has 40 tests drilling. For many years Cowley was one of the most discouraging counties in the State for the wildcatter. It was not until Rainbow Bend Pool was discovered in December, 1923, by the Independent Oil & Gas Co.'s No. 1 Johnson, in Section 20-33-3, did this county begin to receive a big drilling campaign. Following the discovery of oil in the Rainbow Bend Pool, came Winfield, Eastman and several other small pools.

General Utilities Co.'s No. 1 Propp, NE cor. SE SW Section 8-19-4, Marion County, had a small showing of oil at 2,450 feet. This wildcat is in the eastern part of the county. The test was drilling ahead at 2,550 feet on the last report.

Five wildcat locations have been announced this week in western counties: Brown and others' No. 1, NE cor. Section 13-13-18w, Ellis County; Stearns & Streeter's No. 1, SW cor. NE Section 26-13-20w, Ellis County; Prairie Oil & Gas Co.'s No. 1, NE cor. SW NE Section 29-15-21w, Trego County; Kayser and others' No. 1, SE cor. NE Section 6-22-4w, Reno County, and Tom Slick Oil Co.'s No. 1, SW cor. NE Section 23-17-11w, Rush County.

Sinclair's New Line

The Sinclair Crude Oil Purchasing Co. has completed a new 3-inch pipe line to the new wildcat well of the Prairie Oil & Gas Co.'s No. 1 Sellans, SW cor. NE Section 36-15-13w, Russell County, which was recently completed for 250 bbls. in the sand at 3,348-55 feet. The Prairie company has made location for its second test in the NE cor. SW Section 36-15-13w, and has a rig up. Ainsworth Brothers and others spudded in No. 1 Sellans, in the NW cor. SE Section 36-15-13w, Russell County. The tests offset the discovery well.

In the State Pool, north of Winfield, in Cowley County, several tests are drilling in the northwest extension. The Prairie Oil & Gas Co.'s No. 1 Catlet, SE cor. SW SE Section 9-32-4, was spudding; Skelly Oil Co.'s No. 1 A. Youle, NE cor. SE NE Section 16-32-4, fishing for collapsed casing at 1,000 feet; McKnab-Bess Oil Co.'s No. 3 State, SW cor. NE NW Section 15-32-4, fishing for bailer at 2,450 feet.

Hopeless Fishing Job

Ted Washabaugh and others' No. 1 Voshnell, in the NE cor., Section 9-21-3w, McPherson County, which has been fishing at 3,304 feet, after finding a good showing of oil from 3,301-04 feet, will skid the rig and drill a new hole.

The McPherson Oil & Gas Co. which drilled the big Reitz well in Section 1-20-2w, McPherson County, has turned the well over to the Shell Petroleum Corp. It is still pinched in and gauged 1,173 bbls. on August 9. The same company has announced two new locations in the district, one in the SW cor., Section 23-18-2w, the other in the C SW, Section 11-19-2w, which is a half mile west of the big gas well recently completed, No. 1 Decker, SE cor., Section 11-19-2w. The same company's No. 1 Chindberg, in Section 18-19-2w, is still shut down for tanks and a pipe line. No gauge has been taken on the well, but it is estimated to be good for 5,000,000 feet of gas and was spraying oil when it was shut in at a total depth of 3,009 feet.

Barbara Oil Co. has completed another gas well in Barber County. No. 1 Angel, NW cor. NE, Section 14-33-13w, found gas from 4,550-65 feet, where it is making 15,000,000 feet. The test was drilled to a total depth of 4,637 feet. Same company has announced a new location in Section 2-33-13w, Barbara County, which will be drilled in the near future.

The Dixie Oil Co. has announced the first location on the Kansas acreage recently acquired from the Amerada Petroleum Corp. It will be No. 1 Flood, SW SE SW, Section 1-25-2w, Sedgwick County. Operations will be started by the first of next week.

New location in Phillips County, in the northern part of the State, has been announced by the Watsonian Oil Co., NE cor. SW, Section 21-3-19w. The same company is drilling another test, No. 1 Weilman, in the SW cor., Section 34-2-19w, Phillips County, which was drilling at 3,450 feet last Saturday. The county has no oil or gas production. Several other dry holes have been completed in various parts of the county, some having small showings of oil.

Sedgwick County Production

The production by companies and leases in the Sedgwick County area for August 9, is shown by the following:

County, lease—	S.T.R.	Wells	Bbls.
Aladdin:			
Bennington	6-26-1	2	417
Barnsdall:			
Rapp	26-26-2	1	100
Samuel	24-25-1	1	Off
Bu-Vi-Bar et al:			
Branch	6-26-1	2	640
Bright "A"	6-26-1	2	238
Bright "B"	6-26-1	5	1,758
Byers	7-26-1	1	134
Emrich	6-26-1	2	618
T. Goodrich	6-26-1	5	492
Lantz	12-26-1w	2	32
Corr	1-26-1w	7	3,970
Lyons	7-26-1e	3	1,157
Miles	7-26-1	1	91
Reed	1-26-1w	3	1,699
Roll	7-26-1e	1	423
Rothfuss	6-26-1e	1	4
Shawver	7-26-1e	8	5,829
Wright	12-26-1w	5	3,751
Woodward	7-26-1e	1	182
Connell:			
Cross	27-25-1w	1	10
Continental:			
Goodrich	16-25-1e	2	1,083
No. 1 Black	16-25-1	1	77
Davis-Skelly:			
Wilson	1-26-1w	11	3,030
T. M. Deal:			
No. 1 Townsite	15-26-1	1	675
Derby:			
Bowling	6-26-1e	1	82
Gorman	6-26-1e	4	855
Hladick	15-26-1	1	638
Dickey et al:			
Robbins	21-28-1e	1	259
Dickey:			
Nolan	21-28-1	1	154
Gypsy:			
Hammant	14-26-2e	3	524
W. F. Kinney:			
1 Richards	15-26-2e	1	548
Mars Oil Co.:			
Miller	2-26-2	1	154
Mary Jane:			
Fitch	6-26-1e	2	536
Montour:			
Lavender	6-26-1e	2	1,023
Patton & Wentz:			
Swenson	6-26-1	1	90
Phillips Pet. Co.:			
Difford	1-26-1w	3	131
Piefer	6-26-1e	1	111
Plains Oil Co.:			
No. 1 Corn	15-26-1	1	45
Prairie:			
Cross	27-25-1w	1	11
Swyser	36-25-1w	3	304
Producers & Refiners:			
Kuske	24-25-1	1	703
Pyle & Sutter:			
Caldwell	6-26-1e	2	340
Ramsey:			
Mason	15-26-1	1	300
Reynolds & Hays:			
Rolls	7-26-1	1	652
Robertson et al:			
Creson	6-26-1	1	773
Shell:			
Fisher	15-26-2	1	208
Lygrisse	15-26-1	1	131
No. 1 Community	15-26-2	1	1,159
Nolan	21-28-1e	1	94
Stearns & Streeter:			
Roll	7-26-1	1	603
Texas:			
Blood	21-28-1	1	375
Tidal:			
Scherger	6-26-1	3	164
Vickers:			
Nessen	6-26-1	3	216
Wentz:			
No. 1 Bright	1-26-1w	1	201
White Eagle:			
Baylor	6-26-1	1	16
Robbins	20-28-1	1	109
Total		116	37,477

Barber County

Barbara Oil Co. made location for No. 3 Carter, SW cor. SE SE, Section 2-33-13w. No. 1 Angel, C NW NE, Section 14-33-13w, has been completed for 15,000,000 feet of gas in sand 4,554-4,630 feet.

Butler County

Empire Oil & Refining Co.'s No. 17 Huston, NW cor. SE SW, Section 19-26-5, is a rig under construction. No. 85 Koogler, SW cor. SE NW, Section 20-26-5, is a rig on the ground. No. 86

(Continued on Page 112)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

BARBER COUNTY

Company, farm and location—	Remarks:
Rolland & Skelly Oil Co.'s No. 1 Unknown, C NE NW NE Sec. 27-30-14w	Drlg. 4,734 ft.
Skelly Oil Co.'s No. 1 Temple Ranch, Sec. 13-34-15w	Drlg. 2,650 ft.
Barbara Oil Co.'s No. 1 Angel, NW cor. NE Sec. 14-33-13w	Drlg. 4,637 ft.
Robertson et al's No. 1 Powell, SE cor. SE Sec. 11-32-10w	Drlg. 1,200 ft.
Allison & Fitzwilliams' No. 1 Morrisse, C NW SE SE Sec. 9-30-12w	Drlg. 3,730 ft.

BARTON COUNTY

Everett & Wiley's No. 1 Ward, NW cor. SW Sec. 12-20-13w	Shut down 3,948 ft.

BUTLER COUNTY

Travis et al's No. 1 Harrison, SE cor. Sec. 21-25-3	Drlg. 610 ft.
Milmac Oil Co.'s No. 1 Clearwater, SW cor. Sec. 33-25-3	Spudding; shut down.
Lario Oil & Gas' No. 1 Gordon, NW cor. Sec. 15-26-3	Drlg. 1,265 ft.
Sinclair Oil & Gas' No. 1 Johnson, NE cor. Sec. 16-26-3	Drlg. 1,235 ft.
Empire O. & R. Co.'s No. 1 Parks, NE NW Sec. 36-29-4	Drlg. 2,055 ft.
Arkansas Fuel Oil Co.'s No. 1 Campbell, SE cor. Sec. 9-26-3	Drlg. 1,225 ft.
White Eagle's No. 1 Bachelder, SW cor. Sec. 17-25-3e	6-in. csg. 2,775 ft.
Crawford et al's No. 1 Thompson, NW cor. SW Sec. 2-24-3e	Drlg. 2,530-34 ft.; 1,800 ft. oil in hole, testing.
Aladdin Petroleum Co.'s No. 1 Bronsenger, NE cor. NE SW Sec. 24-27-3	Viola 3,012-22 ft.; show oil; testing.

CLAY COUNTY

Derby Oil Co.'s No. 1 Meimueller C NW SW Sec. 9-10-3e	Rig.

COWLEY COUNTY

Landon & Slick's No. 1 Daniels, NE SE Sec. 6-30-5e	Drlg. 2,100 ft.
J. B. Markley's No. 1 Tatum, SE cor. SW Sec. 11-31-6	Drlg. 600 ft.

DICKINSON COUNTY

Cress & Hawky's No. 1 Menli, NE cor. Sec. 12-15-2	Rig.
Prairie Oil & Gas Co.'s No. 1 Morgan, NW cor. Sec. 26-16-3e	Drlg. 2,730 ft.
Milmac's No. 1 Biehler, SW NE Sec. 28-16-4e	Drlg. 2,716 ft.

ELLIS COUNTY

Phillips Pet. Co.'s No. 1 Harjo, SE NW Sec. 9-13-19w	Drlg. 340 ft.
Mid-West Exploration's No. 36 Berens, C SE NW Sec. 12-13-16w	Rig.
Phillips Pet. Co.'s No. 1 Harder, NE SW Sec. 8-12-17w	Drlg. 3,704 ft.
Byrens et al's No. 1 Fisher, NW SE Sec. 4-11-20w	Spudding.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w	Fishing 2,555 ft.
Finney & Weiner's No. 1 Freeman, SE cor. SW Sec. 24-15-20w	Spudded and shut down.
Phillips Pet. Co.'s No. 1 Johnson, SW cor. NE Sec. 9-13-19w	Drlg. 3,593-95 ft.; completed 380 bbls. daily.
Phillips Pet. Co.'s No. 1 Schneider, NW cor. Sec. 20-12-17w	Drlg. 3,429-39 ft.; 108 bbls. in 8 hrs.; shut down.
Burger et al's No. 1 Hadley, SW cor. SW NW Sec. 20-11-17w	Drlg. 3,408-20 ft.; 2,000 ft. oil in hole; testing.

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PUMPS & SUCKER RODS

Darst Creek Pool Revives Interest

New Edwards Lime Area in Guadalupe County Again Calls Attention to Balcones Fault Possibilities. Important Tests

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Aug. 12.—The Texas Company's No. 1 Lemmie Anderson, the second test drilled in the new Darst Creek Pool in Guadalupe County, primarily reported as No. 2 Lemmie Anderson, early this week was coring for the Georgetown and before the end of the week may be in the Edwards lime and showing for a well.

It is a north offset to No. 1 Dallas Wilson which is the discovery well and it topped the Austin chalk at 2,228 feet compared with 2,237 feet in the discovery well. First reports were that it had the chalk a little low but this proved to be an idle rumor. The discovery well in this pool is still awaiting pipe line connection and the shutdown agreement among the big companies still holds good. Strube & Strube and Cranfill & Reynolds have started their test in the field due north of the discovery well on the Denmann tract, a distance of approximately a half mile. There are other derricks and locations in the field but no other drilling started.

With the opening of a new Edwards lime field in the Balcones Fault zone operators are giving study again to the Edwards lime as a producing formation. Oil does not originate in the Edwards lime but is there by migration from some other formation. The Edwards is cavernous in places and the big production is due to it having a tendency to be very porous. A study of the old Luling Field and the new Joe Bruner Field discloses that the Bruner Field has produced up to this time a total of about 7,000,000 bbls. of oil and is really not a year old. Joe Bruner's discovery well in the Austin chalk went on pipe line run reports first in May, 1928, but the Sun Oil Co.'s discovery Edwards lime test was first reported in the pipe line runs in October, 1928, and there were then five other wells in the field all producing from the Austin chalk.

The discovery well in the old Luling Field was brought in late in 1922 and the total first year's production was 1,169,000 bbls. and the second year's production was a little over 10,000,000 bbls. The Bruner Field is thus far ahead of the old Luling Field in production though it is also somewhat ahead of it in number of wells producing compared with the same length of time the field was in. The Bruner wells are not drilled so far into the Edwards lime and are producing less water than the wells in the old Luling Field.

There were quite a bunch of completions in the Bruner Field the past week, all of them average wells with the initial production from 75 bbls. up to 600 bbls. with the exception of the Gulf Production Co.'s No. 7 J. L. Northcut, J. Hinds Survey, flowing 1,700 bbls. initially at a depth of 2,691 feet. An even dozen of the completions were by the Humble Oil & Refining Co. and the Humble jointly with the Luling Oil & Gas Co., with two by the Gulf Production Co. and one each by Cranfill & Reynolds, T. C. Hadley, and Nash, Windfohr & Perry.

Corpus Christi Area

In the coast country two wild gas wells stirred things up for a short time. Houston Oil Co.'s No. 1 Tolbert, completed some time ago and putting gas in the line blew a gasket and ran wild, stripping the master gate valve and connections but is again under control. In San Patricio County, Spencer & Rhodes' No. 1 Texas fee broke all connections and ran wild but was later put under control and the gas again turned into the line.

Smi-lock Petroleum Co. of Fort Worth has turned 1,500 acres in Caldwell County to the Marland Production Co. on a contract that calls for the Edwards lime test and a tentative location has been made. This location is about 3 miles southeast of the Bruner Field and is especially significant. The Humble and Gulf companies each have protection acreage in the block. The tentative location is 1,500 feet from the northwest and southwest lines of the D. C. Muenster 1,180-acre tract in the Silas Fuqua Survey, 3 miles southeast of the Joe Bruner Field at Luling and 4 miles due north of the Empire Gas & Fuel Co.'s No. 1 Norwood in Gonzales County. The well is to be an Edwards lime test and with the Edwards topped at around 2,700 feet in the Joe Bruner Field and accounting for a regional dip which is pretty steep to the southeast from the Bruner Field, the Marland test may not get the Edwards short of 3,500 feet.

Abandoned Wildcats

Some interesting wildcats have been abandoned during the past week, among them the Gypsy Producing Co.'s No. 1 Lottman in Bastrop County, north of the city of Bastrop, abandoned at 3,028 feet at contract depth. Around 2,400 feet it is understood to have shown considerable oil so much that another test will likely be drilled probably to the east. The No. 1 Lottman was taken over by the Sun Oil Co. at around 2,460 feet and completed to contract depth. It has the showing of oil in the Serpentine. Too far away to have any relation to the same proposition the Sun Oil Co. is core drilling in northeastern Bastrop County near Paige. J. A. Harper has the derrick up for his No. 1 R. R. Mitchell in Block 105, about 1½ miles nearly due north of the Gypsy Producing Co.'s abandoned test. No. 1 Lottman is the second test drilled by the Gypsy in the last few years in that territory.

Balcones Oil Corp. will probably abandon its No. 1 Jackel in southwestern Bexar County. It got chalk at normal depth, but the other formations below the chalk ran thin giving it an opportunity, it is thought, to get the Edwards high. Final calculations showed the Edwards nearly normal and the drill showed it to be dry. It is possible the test may be carried to the Trinity sand. At 2,107 feet it is 64 feet in the Edwards lime and standing.

Another wildcat that developed interesting information the past week is the Sinclair Oil & Gas Co.'s No. 1 Tewes in western Guadalupe County, near the Bexar County line, which at 1,655 feet topped the Austin chalk about 300 feet below. A line of three tests laying to the southeast and east of this test give ample information for contouring the chalk and a 300-foot break indicates at least that there is a considerable fault there that naturally invited the operator to do more drilling. The No. 1 Tewes will be carried to the Edwards lime to complete the contract.

Laredo District

There was only one producer completed in the Laredo district the past week and it was in the Schoolfield-O'Byrne Pool, and came in for 75 bbls. It extends the field one location to the southeast.

Feature of the Laredo territory is the Killam-Duggan No. 5 Cuellar in Zapata County in sand at 1,588-92 feet which on a drill stem test filled 12 threbles of drill pipe with oil in 10 minutes and was closed in. The regular sand in that field is at 1,465 feet and this is the first test to go deeper. The discovery well flowed about 135 bbls. of oil a day for some time. One mile north a producing sand was found at 1,565 feet which may be the same as the 1,592-foot sand of Killam-Duggan. The new test looks like a big well and some believe it will make around 1,000 bbls.

In the Schoolfield-O'Byrne Pool the Magnolia Petroleum Co.'s No. 4 Hall in sand at around 2,340 feet is being completed and it is believed will make 200 bbls. or more. It is in an inside location.

Magnolia Petroleum Co. is drilling two deep tests in the Laredo district, following its policy of frequently shooting tests on down when they prove dry at the regular sand depth. They make a deep test with the advantage of having part of it already drilled. Magnolia's No. B-7 Hahl at the north end of the Schoolfield-O'Byrne Pool in Duval County, the farthest north location is down 4,470 feet with nothing of particular interest showing yet. Regular producing sand in that field is at 2,340 feet. Magnolia's No. 1 M. Benavides at the north end of the Magnolia-Cole Pool in Webb County is down 3,760 feet and coring. The producing sand in that field is also at around 2,340 feet.

Miscellaneous News

News from Southwest Texas the past week of more than common interest is not localized but scattered over the entire district. Humble Oil & Refining Co.'s No. 4 Flato, the deep test in the Kingsville Field at 6,577 feet has not yet been tested out according to last reports. They are giving the cement plenty of time to set.

Magnolia Petroleum Co. is getting started on its No. 1 Cook in the northern part of Jim Wells County, 6 miles north of Orange Grove.

Trinity Drillers with the Sun Oil Co. owning a three-fourths interest has started No. 1 Tompkins in western Nueces County where a block of 20,000 acres has been assembled.

United North & South Development Co. is started on its No. 1 Edwards on Lamar Peninsula north of Rockport, and was down nearly 1,400 feet at last accounts. Every preparation has been made for an extra deep test. The company has an extra heavy rig and two strings of surface casing have been cemented from top to bottom to guard against blowouts.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ARANSAS COUNTY

United North and South Dev. Co.'s No. 1 Kate Edwards, Lewis Sur. ..... Drlg. 1,150 ft.; gumbo.

ATASCOSA COUNTY

Tom Draper's No. 1 McCoy, Sur. 234 ..... Location.
Amphion Oil Co.'s No. 1 Sam Schlisser ..... Shut down 2,300 ft.; repairing rig.

BASTROP COUNTY

Gypsy Oil Producing Co.'s No. 1 Lottman estate ..... Abandoned dry 3,029 ft.
Gulf Production Co.'s No. 2 Bell, Riley Sur. ..... Location.
Jim Harper and others' No. 1 R. R. Mitchell ..... Derrick.
Howell Oil Corp.'s No. 1 F. Wichman ..... Drlg. 1,995 ft.
E. W. Ogden's No. 1 Goodman ..... Drlg. 2,535 ft.
Pacific Oil & Gas Co.'s No. 1 Darnell & Bickler, Martha Baker Sur. ..... Derrick.
Pacific Oil & Gas Co.'s No. 1 Spooner, Leverenz Sur. .... Drlg. 1,425 ft.
Moore & Ortman's No. 1 Ortman, Andrew Graham Sur. .. Location.
E. W. Ogden's No. 2 M. M. McCall, Stephen F. Austin Sur.. Abandoned dry 2,912 ft.; sandy shale.
Frank Rundus' No. 1 fee ..... Drlg. 1,600 ft.
Superior Oil Co.'s No. 1 R. J. Moore, J. Raines Sur. ..... Location.

BEXAR COUNTY

Balcones Oil Corp.'s No. 1 F. A. Jackle ..... Drlg. 2,183 ft.; dry, waiting orders.
Guy S. Fisher's No. 1 S. L. Beck, P. W. Hays Sur. ..... Location.
Hamilton & Kennon's No. 1 Hamilton, near Gas Ridge .. Spudded in.
Moore-Jauer's No. 1 Holly R. Ellison ..... Drlg. 1,640 ft.; good oil showing.
Mrs. A. R. Garrett's No. 1 Ponciano Pena ..... Drlg. 540 ft.
C. J. Le Compte's No. 3 R. Diaz, J. M. Urriegas Sur. .... Location.
E. G. Potter's No. 1 Watson, B. Martinez Sur. ..... Drlg. 2,060 ft.; showing oil and gas.

BLANCO COUNTY

J. Bekning's No. 1 Butler, Butler Sur. ..... Moving in machinery.
J. E. Forbes and others' No. 1 E. Bruckner ..... Drlg. 720 ft.
Ashe & Marshall's No. 1, 5 mi. S Johnson City ..... Location.

BROOKS COUNTY

Milam Drlg. Co.'s No. 4 Riley Allen ..... Formation test comp. 1,498 ft.
Milam Drlg. Co.'s No. 6 Reilly Allen, SW part of county.. Formation test; drlg.
A. W. Dinn's No. 1-B Garcia ..... Shut down 450 ft.
Houston Oil Co. of Texas' No. 1 Lassiter, Survey 69..... Standing 3,500 ft., contract depth; waiting orders.

CALDWELL COUNTY

Cranfill & Reynolds' No. 1 Berensdorf, A. Floyd Sur. .. Location.
Cranfill & Reynolds' No. 2 Dauchy ..... Skidding derrick from No. 1.
J. A. Harper's No. 2 Miller ..... Standing 1,642 ft.
W. H. Harper's No. 3 Thomas, J. Roberts Sur. ..... Moving in machinery.
H. C. Ratcliff's No. 1 J. E. Cardwell, J. F. Bell Survey... Rigging up.
Cranfill & Reynolds' No. 1 Dauchy ..... Abandoned dry 2,059 ft.
John T. Callahan and others' No. 1 W. Ellison ..... Drlg. 2,200 ft.
M. O. Rayor's No. 1 J. Keefer ..... Drlg. 2,775 ft.
J. S. Brutsche's No. 1, R. L. Quinn Sur. ..... Location.
Whittington and others' No. 1 J. G. Horner ..... Abandoned dry 2,020 ft.

COLORADO COUNTY

Cagle-Concord Oil Co.'s No. 1, Sec. 42 ..... Spudded in.

DUVAL COUNTY

Magnolia Petroleum Co.'s No. 1 Corbett, Sur. 96 ..... Drlg 2,260 ft.
National Oil Co.'s No. 2 Ball, Agua Poquita Sur., Blk. 3.. Derrick.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlaw ..... Drlg. 2,500 ft.

FAYETTE COUNTY

Magnolia Petroleum Co.'s No. 1 Henry Gully ..... Drlg. 2,510 ft.

(Continued on Page 116)

SOUTHWEST TEXAS

Branyon	23
Bruner	48,946
Dale	473
Darst Creek	*0
Gonzales	6
Kingsville	697
Larremore	159
Luling	11,398
Lytton Springs	979
McMullen County	42
Medina County	32
Mirando	10,735
Somerset	1,789
Yoast	1,230
Total	76,503
Week Ending August 3	76,976
Decrease	473

*Shut in.

COMPLETIONS

Bexar County

W. W. Richardson's No. 1 G. Schmetz estate, P. L. Buquor Survey, 131 feet north line, 150 feet west line; total depth 615 feet; initial production 5 bbls.

Duval County

G. M. Partee's No. 5 Moody, Survey 60

(Continued on Page 125)

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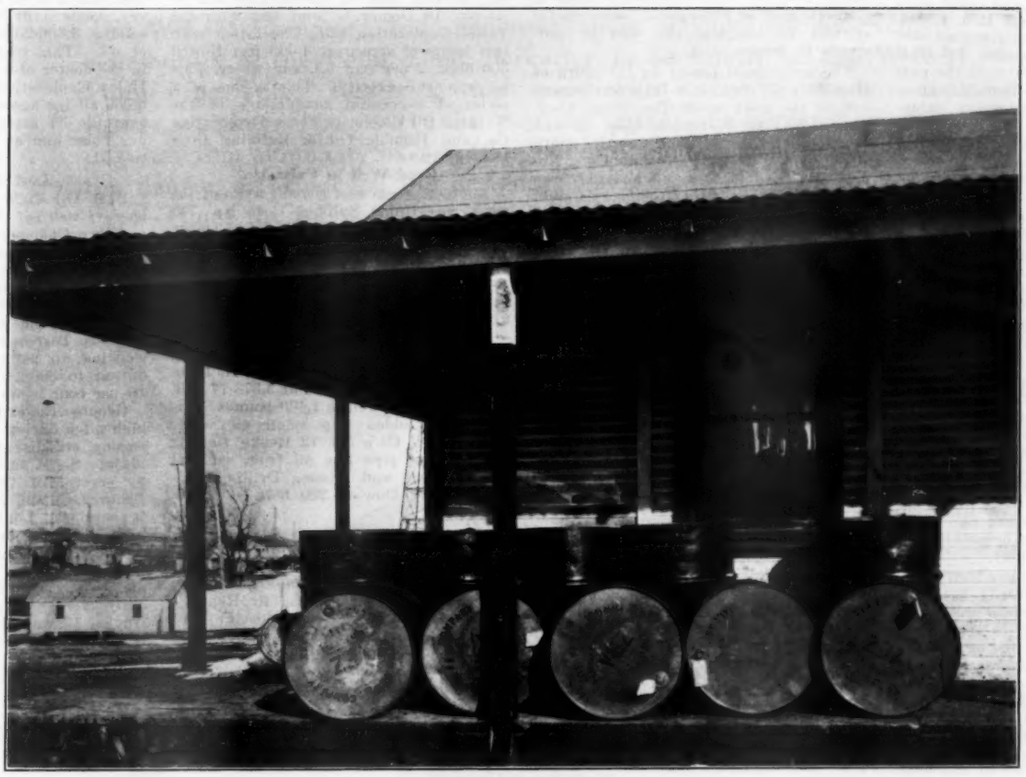

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WINK, TEXAS
PAMPA, TEXAS
BENAVIDES, TEXAS
EL DORADO, ARKANSAS
SEAL BEACH, CALIFORNIA

Barbers Hill Output Up To 15,000 Bbls

Twenty-two Rigs Operating, Five Rigging Up and Other Locations Made. Humble Deep Horizon Most Promising on Coast

By Nell Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Aug. 12.—With 22 rigs actually operating, 5 tests rigging up and with other locations constantly being made, the play for the deep sand production on the east and south sides of Barbers Hill, Chambers County, commanded the attention of Gulf Coast operators the past week, although important production extensions in the deep sand development south of the Humble field opened further possibilities for a renewed activity in the lower horizons around that dome.

The daily production of Barbers Hill already is up to nearly 15,000 bbls. daily as a result of good wells brought in within the past three weeks, and a half dozen other deep tests in the oil sand and expected to be completed before the close of this week, and several others near the pay no doubt will increase the output of the field materially and place it in second place to Spindletop.

The entrance of The Texas Company to the development of the southeast flank pool recently opened by the Republic Production Co. was made known with the staking of a location for its first test which will be on the Wilburn tract. The Texas Company followed the Sinclair Oil & Gas Co. which is starting two tests, and makes a total of nine operators now active in this deep sand play.

Although no new wells have been added for several days, plug already has been drilled in three deep tests and these now are drilling into the sand to set screen, starting the important series of tests to be made within the next week or 10 days. Republic Production Co.'s No. 1 McKinney (Kirby), which came in as a wildcat on the southeast flank two weeks ago still is holding up better than 2,900 bbls. daily on chokes. Yount Lee Oil Co.'s No. 1 Kirby, an offset to this well, should be among those wells completed during the week and as it is the second hole to reach the deep horizon in that area its outcome is being watched.

Most Promising on Coast

The opinion that the deep horizons on the south of Humble are among the most promising of any on the Gulf Coast and that production will be extended a great distance around the dome was substantiated further the past week when Humble Oil & Refining Co.'s No. 2 Williams blew in flowing 72 bbls. of pipe line oil hourly. This well, an offset to Continental Oil Co.'s wildcat, No. 1 Cezeaux, which has been trying to make a well for several weeks, is approximately 2,500 feet to the southwest from the past main development on the Morris and Landslide tracts of the South Texas Petroleum Co. and The Texas Company, respectively.

Humble's new well is flowing without screen in the hole from a sand at a total depth of 3,790 feet with the 9⅝-inch casing seated at 3,740 feet. Like other wells on the south of Humble it encountered the heavy gas pressure which has hindered operators from getting screen down in the other holes. This well tried to blow out from that sand and so was connected up without the screen. It is flowing through a 1⅝-inch choke and the oil is the usual light gravity of the Humble deep horizon, being 42.3 gravity at 82 degrees.

Continental Oil Co.'s well, which it offsets, so far has not been completed successfully but has been swabbing between 100 and 200 bbls. daily. It also has been having considerable trouble with gas but is expected to make a fair well. The latter is at a total depth of 4,520 feet. One other small producer has been completed in this area, The Texas Company's No. 264 Landslide. It, however, is some distance to the east and was a north offset to Humble's No. 1 Williams, which recently was abandoned after a blowout and a consequent unsuccessful attempt to complete the well or pull screen to deepen.

The main development on the south of Humble also created a little excitement late in the week when The Texas Company's No. 40 Stevenson blew in and caught fire. At the same time its south offset, South Texas Petroleum Co.'s No. 7 Morris tried to blow out and also was ignited from The Texas Company's well. Both fires were extinguished quickly and the Morris blowout killed. The Texas Company's well is flowing an estimated 300 bbls. daily of oil from a sand and shale at 5,224 feet. It is the most northeasterly well of the deep pool.

Fire at Hull

Another oil well fire marked Gulf Coast operations. This was Republic Production Co.'s No. 68 Dolbear at Hull, which, although burning for a week, late Saturday had not been put out. This well ignited, presumably from an electric spark, a short time after it was completed flowing an estimated 1,500 bbls. of oil daily from sand at approximately 2,600 feet. Although for a time threatening adjoining wells in the field that danger apparently has been averted with a shutdown of closeby producers. This is the second fire for this well. It is a workover and at its original completion a number of years ago it burned for over two weeks.

Blue Ridge received a substantial extension of production on the west flank Saturday when Navarro Oil Co.'s No. 1-C Robinson, Duff and Robinson Subdivision, was brought in flowing initially at the rate of 64 bbls. an hour with three joints of 4½-inch screen set at 4,281 feet. Navarro also got another fair well on the east side of Pierce Junction in its No. 16 Dooley, a joint test with the Texas Exploration Co. The latter with two joints of screen at 4,665 feet flowed 500 bbls., 2 per cent b.s. and water. This oil was 31.5 gravity. This is one of a series of successful completions of the Navarro Oil Co. on its Texas Exploration Co. and Humble Oil & Refining Co.'s Dooley tracts.

Good Well in Calcasieu

Another of the best coastal wells of the week was Union Sulphur Co.'s No. 748 fee on the west side of the Sulphur Dome, Calcasieu Parish, Louisiana. This well, deepened from 4,036 feet, where it first was tested to a sand at 4,055 feet, flowed initially at the rate of 1,875 bbls. of 20.9 gravity pipe line oil.

Among other completions was a 75,000,000-foot gasser at Refugio, this being Houston Gulf Gas Co.'s No. 9 J. A. Lambert, which is in the sand at 3,573-77 feet. Pressure of the well is 1,400 pounds. This field also added two small oil wells, Houston Oil Co.'s No. 12 Rooke, flowing 200 bbls. of pipe line oil from sand at 3,686-93 feet, and Mission Drilling Co.'s No. 1 Shay, flowing 200 bbls. at 3,660-64 feet.

Other completions were of little interest, these including two workovers at Blue Ridge; two small wells at Raccoon Bend; three workovers at Spindletop; one at Hull (in addition to Republic Production Co.'s No. 68 Dolbear); one at Orange; one at Lockport, and a small pumper on the south side of the old Hackberry Dome.

Coastal operators at the close of the week were watching Harvey Smith and associates' No. 1 Moore's Bluff on the deep torsion balance dome prospect discovered by the Union Exploration Co. in the western part of Liberty County. This test, which is in the C. C. Brunson Survey, made a drill stem test of a likely sand at 3,306-26 feet and showed fourbles of oil. This test is in a 34-acre tract in the center of a large block held by the Union Exploration Co. The latter, which holds all the acreage around the dome except the 34 acres, has drilled two deep dry holes and at present is on its third test.

Lost Lake Dome

Pure Oil Co.'s No. 2 Mayes, the discovery well of the Lost Lake Dome, northern Chambers County, completed 10 days ago, continues to flow by heads, increasing its flow slightly from the initial 180 bbls. daily. Another wildcat producer, The Texas Company's No. 1-B Lake Pelto on the Lake Pelto Dome, southern Terrebonne Parish, Louisiana, is showing up better, having increased its output to 890 bbls. daily of which only 10 per cent is water.

Geophysical exploration continued at a high pitch during the week. Considerable leasing still is being done in scattered plays. Some activity is being displayed by several of the larger companies in Beauregard and Allen Parishes, parishes in southern Louisiana which have not been in the limelight in the past.

Daily production of the coastal fields indicated further gains the past week due chiefly to Barbers Hill. The total daily average output for the week ending August 10 was 158,369 bbls., an increase of 3,516 bbls. over the preceding week. Figures were:

GULF COAST

Texas

Allen	11
Barbers Hill	14,658
Batson	1,333
Big Creek	4,198
Blue Ridge	3,238
Brenham	275
Boling	1,509
Clay Creek	2,315
Damon Mound	640
DeWalt	11,521
Goose Creek	5,784
High Island	1,566
Hull	7,951
Humble	6,592
Jasper	25
Markham	375
Nash	475
North Dayton	615
Orange	2,834
Orchard	85
Pierce Junction	17,533
Port Neches	576
Refugio	4,636
Raccoon Bend	8,164
Saratoga	935
Sour Lake	2,795
S. Liberty-S. Dayton	5,218
Spindletop	26,756
West Columbia	6,237
Total Texas Coast	138,850
Week Ending August 3	137,118
Increase	1,732

South Louisiana

Anse La Butte	50
Bayou Bouillon	155
Black Bayou	108
Dog Lake	47
Edgerly	749
Jennings	2,441
Hackberry	4,501
Lake Pelto	750
Lockport	3,247
Port Barre	658
Sorrento	168
Starks	404
Sulphur	3,500
Sweet Lake	35
Vinton	4,248
Welsh	35
Total South Louisiana	21,096
Week Ending August 3	19,312
Increase	1,784
Total Gulf Coast	159,946
Week Ending August 3	156,430
Increase	3,516

GULF COAST FIELDS AND WILDCATS

Week Ended August 10

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 3 Smith, east flank	Temporarily abandoned; drill stem stuck; total depth 5,381 ft.
Mills Bennett Production Co.'s No. 1 Collier (southeast)	Derrick.
Mills Bennett Production Co.'s No. 1 Barber (north side)	Reaming 800 ft.
Mills Bennett Production Co.'s No. 1 Barrow (workover)	Drlg. shale 4,148 ft.
Humphreys Corp.'s No. 8-A Kirby, east flank	Drlg. hard shale and sand 5,444 ft.
Humphreys Corp.'s No. 1-H Kirby, east flank	Drlg. broken lime 4,818 ft.
Humphreys Corp.'s No. 2-H Kirby, east side	Drlg. plug 4,989 ft.; to test oil sand.
Humphreys Corp.'s No. 3-H Kirby, east side	Drlg. shale 4,697 ft.
Humphrey's Corp.'s No. 1 Tarbutton, east flank	Drlg. sand rock 5,055 ft.
Humphreys Corp.'s No. 1 Illfrey, east flank	Drlg. plug 4,975 ft.; to test oil sand.
D. B. McDaniels' No. 1 Woodward (southeast)	Rig.
D. B. McDaniels' No. 2 Woodward (southeast)	Drlg. gumbo 1,052 ft.
Moody Corp.'s No. 1 Illfrey	Comp. flowing 2,100 bbls. on ½-in. choke; total depth 5,140 ft.
Republic Prod. Co.'s No. 2 McKinney (southeast)	Drlg. gumbo 220 ft.
Rexal Oil Co.'s No. 3 McLean, east flank	Drlg. gumbo 3,394 ft.
Rexal Oil Co.'s No. 1 Smith, east flank	Swabbing to test oil sand 5,169 ft.
Rexal Oil Co.'s No. 1 Cockburn, east flank	Cemented 6⅝-in. casing 5,048 ft.; to test oil sand.
Sinclair Oil & Gas Co.'s No. 1 McKinney (southeast)	Rigging up.
Sinclair Oil & Gas Co.'s No. 1 Wilburn (southeast)	Rigging up.
Sun Oil Co.'s No. 3 Chambers, south flank	Drlg. sandy shale and lime 3,943 ft.
Sun Oil Co.'s No. 1 McKinney (southeast)	Drlg. sand and boulders 1,694 ft.
Sun Oil Co.'s No. 2 McKinney (southeast)	Rig.
Sun Oil Co.'s No. 1 Wilburn (southeast)	Spudded.
The Texas Company's No. 1 Wilburn (southeast)	Location.
Yount Lee Oil Co.'s No. 4 Chambers, southwest	Drlg. water sand 7,583 ft.
Yount Lee Oil Co.'s No. 7 Chambers, south	Set 112 ft. screen 5,181 ft.; to test oil sand.
Yount Lee Oil Co.'s No. 1 Kirby, southeast	Drlg. shale 5,413 ft.
Yount Lee Oil Co.'s No. 1 Woodward (southeast)	Drlg. hard sand and lime 2,484 ft.

BOLING—FORT BEND AND WHARTON

Sun Oil Co.'s No. 8 E. C. Farmer	Rig.
The Texas Company's No. 2 Pleasants, northwest	Drlg. sand 3,785 ft.
Vacuum Oil Co.'s No. 3 Taylor, south side	Bailed dry; sand 3,940 ft.

RACCOON BEND—AUSTIN COUNTY

Humble & Valley's No. 5 Hardy	Drlg. sticky shale 2,726 ft.
Humble & Valley's No. 2 Buchanan	Drlg. shale 3,280 ft.
Humble Oil & Refg. Co.'s No. 2-B Mitchell	Drlg. sticky shale 1,224 ft.
Humble & Valley's No. 2 Stravoski	Abandoned in shale 4,100 ft.
Humble & Valley's No. 3 Walton	Flowing 500 bbls. pipe line oil 3,350 ft.
Humble & Valley's No. 1-B Walton	Drlg. shale and shell 3,314 ft.
Humble & Valley's No. 4 Walton	Waiting cement to set 1,241 ft.
Humble & Valley's No. 4 Dietrichs	Drlg. shale 2,798 ft.
Humble & Valley's No. 1 Jackson	Waiting cement to set 3,542 ft.
Humble & Valley's No. 4 Austin College	Setting tubing 3,482 ft.; to pump.

(Continued on Page 117)

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Cotton Valley Show From New Level

New Crater Complicates Development in Richland Parish Field. Wild Well in Monroe District Burning. Urania Has Two Gassers

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 12.—Production from a new level and in the best sand conditions yet encountered in exploring the deeper horizons of the Trinity group in the Cotton Valley district of Webster Parish appears indicted by a weeping core Standard Oil Co. took from 4,612-19 feet in No. 22-B Bodcaw Section 28-21-10 on acreage formerly owned by the Humble Oil & Refining Co. The well is the first Standard has drilled on acreage in proven areas taken over from the Humble company last June. The core was solid sand saturated with a very light crude as most of the oil had evaporated by the time the core reached Shreveport. Another 12-foot core is being taken as this is written and results are awaited with considerable interest as this is the first item to afford the fraternity any "kick" to amount to anything in some time. At the depth the first core was taken the sand was topped approximately 188 feet higher than production was obtained in Ohio Oil Co.'s deep sand discovery well, No. 38 Bodcaw in Section 15-21-15, 2 miles north and a little east, which flowed at the rate of 3,658 bbls. of 50.5 gravity oil, total depth 4,683 feet.

New Richland Crater

At the other end of the news of the week is a Richland Parish blow-out. If a crater well in a gas field is a sore spot, a boil, Richland has a carbuncle. A month ago Northern Louisiana Natural Gas Co.'s No. 1 Boykin, Section 20-17-6, blew in with an estimated 65,000,000 feet of gas, total depth 2,210 feet, and cratered. Nos. 2 and 3 were started on short offsets as relief wells. No. 3, the first drilled, set 182 feet of surface pipe and was setting 10-inch at 908 feet when gas escaping into a fresh water sand caused it to blow out. And now comes No. 2 repeating the performance, only it had not gone so deep and had only 158 feet of 15½-inch surface string cemented. It was drilling at 535 feet when gas from the original crater caused it to blow out.

It is making considerable sand; so much that by the time trucks got there to move the rig crews had to dig the machinery out of a 16-foot dune. Sand accumulated faster than men could dig and only the rotary, traveling block, etc., were saved, the pumps being buried. Eventually this sand is going to "get" the casing also and then a situation already regarded as hopeless will be further complicated. Experts in this division see no way of lancing the Boykin carbuncle. It is impossible to do anything with the original crater and it now seems equally impossible to do anything with it by drilling relief wells to drown it out as they don't seem to be able to get through the shallow gas permeated sands and set casing on top or in the pay streak.

Two miles east of this situation, Palmer Corp. successfully completed No. 1-A Jones, Section 22-17-6, gauging 6,097,000 feet of gas, total depth 2,457 feet. In the southeast corner of proven territory International Gas Products Co.'s No. 1 Beck, Section 25-16-6, was completed gauging 51,768,000 feet of gas, total depth 2,460 feet. Hope Production Co. made location 660 feet north and east SW cor. NW Section 21-17-6 for No. 1 Boykin and Magnolia Petroleum Co. has derrick up for No. 1 B. F. Sartor 1,087 feet west and 787 feet north of the center of Section 17-16-6. Hope Production Co.'s No. 1 Eubanks in Section 26-17-6 evidently is a dry hole. A test at 2,450 feet where production might be expected was a failure and, drilling lime at 2,640 feet, nothing to test has been found in between. Magnolia's No. 3 C. M. Noble, an edge well in the southwestern corner of the field, also appears to be a failure, testing salt water at 2,464 feet where it is shut down for orders and probably will be abandoned.

Monroe Well Burning

The Monroe district with three completions this week, one of them a wild well that is burning, will have a much larger crop next week as 3 wells are bailing to test as this is written and 9 others have 6-inch cemented, most of which will be tested during the week. Consolidated Carbon Co.'s No. 2 J. White in Section 16-20-4 Morehouse Parish is the first accident the district has had in some time. It blew out a week or 10 days ago with shallow gas, estimated at 20,000,000 feet, from 235 feet and caught fire. It had no casing in the hole for the reason there is nothing above this shallow stuff to anchor a string of pipe to and the gas itself is looked upon more or less as waste gas as no means of recovering it has been successfully worked out. Natural Gas Producing Co.'s No. 15 Tensas, Section 4-22-4, Morehouse Parish, was completed at 2,220 feet, making 2,036,000 feet of gas at 1,050 pounds. West Virginia Oil & Gas Co.'s No. 8 West Virginia Timber Co., Section 8-18-4, gauged 5,646,000 feet at 1,020 pounds, total depth 2,203 feet.

Ouachita Natural Gas Co.'s No. 2-B D'Arbonne, Section 25-19-2e, a Ouachita Parish wildcat a few miles west of production, is benefiting from the prolonged hot weather. It has been under water until recently but now that the drought has made work possible a fuel line is being laid as the first step in drilling deeper from 3,349 feet where it was shut down last December. Farish & Russell did not make a test at 4,207-9 feet where No. 1 School fee, Section 16-16-4, Ouachita Parish, was reported to have cored oil sand, and are drilling gumbo at 4,265 feet. Tidal Oil Co. has taken a five-year commercial lease with no drilling obligations on a block of 3,000 acres centering on Section 24-17-1e, Ouachita Parish, 6 miles southeast of Calhoun, Ouachita Parish and about 20 miles southwest of production.

Louisiana

	Bbls.
Caddo, light	9,365
Caddo, heavy	3,300
Homer	3,920
Haynesville	5,035
De Soto-Red River	3,645
Elm Grove	505
Bellevue	655
Cotton Valley	2,400
Urania	6,400
Pleasant Hill	530
Sarepta	250
Total	36,005

Arkansas

El Dorado	4,600
Smackover, light	6,030
Smackover, heavy	46,335
Stephens	1,010
Nevada County	990
Lisbon	1,215
Champagnolle	7,035
Bradley	100
Total	67,315
Both states	103,320
Last week	103,520
Decrease	200

Dixie District

Dixie district of Caddo Parish is missing from the week's completions record and two of three important wells did not show much of promise. Early in the week a rumor got started that D. C. R. Oil Co.'s No. 2 Oden in Section 20-19-14 in the same section with its extension of last week had come in with 1,000 bbls. initial but instead of that it got 5 joints of salt water with a small initial show of oil on drill stem test at 2,445 feet and is drilling deeper. The extension well, No. 1 on the same lease, made 20 bbls. from 2,423 feet. Gulf Refining Co.'s No. 5 Oden in Section 18-19-14, was dry at 2,407 feet and is shut down in shale at 2,454 feet waiting orders. Haynes Brothers' No. 1 Oden in Section 19-19-14, cored sandy shale with thin streaks of oil sand from 2,385-90 feet and will cement 6⅝-inch at 2,385 feet for a test. Gold & Sklar's No. 2 Hunter, across the "40" from their big well of a few weeks ago, was dry at 2,421 feet and was coring at 2,428 feet. No. 1 was completed with 700 bbls. initial at 2,415 feet. S. T. Onyett and others' No. 1 Dixon, Section 10-19-14, was dry in the Nacatoch at 868-88 feet after getting a show of oil. Simplex Oil Co. appears to have missed everything in No. 1 S. A. Dickson, Section 33-20-14, testing dry at 2,468 feet. Drilling at 2,590 feet it had salt water in the hole.

Shreveport Oil Corp.'s No. 1 Cheshire, Section 32-21-15, Oil City district, was cleaned out and put on the pump making 5 bbls. from 2,156 feet. The Texas Company's No. 69 Levee Board, Section 27-21-16, in the same district, pumped 55 bbls. initial from 1,839 feet; No. 70 is drilling at 1,491 feet and No. 71 is a location, both in the same section. W. D. Chew's No. 2-C Levee Board, Section 34-21-16, is drilling from the same derrick as No. 1, going for shallow gas in the Nacatoch. Palmer Corp.'s No. 2 McDade, Section 13-17-12, Elm Grove-Sligo district of Bossier Parish, gauged 1,600,000 feet of gas at 700 pounds, total depth 1,700 feet.

Urania District

Two wells in the Urania district of La Salle Parish are listed as gassers. Montagu Oil Co.'s No. 1 Zenoria Lumber Co. in Section 11-9-1e, is a completion with an estimated 300,000 feet of gas with salt water, total depth 1,500 feet, and Philp Brothers' No. 1 Urania, Section 1-10-1e, is a gasser at 700 feet in the same horizon where Randal and others got a gas completion and a lost hole following a blow-out in another test in the same section about a year ago.

Webster Parish, in addition to the highly interesting core from the Standard Oil Co.'s No. 22-B Bodcaw, furnished a well gauging 5,443,000 feet of gas at 1,080 pounds from 4,639 feet in Ohio Oil Co.'s No. 43 Bodcaw, Section 24-21-15. Gardner, Harter & Brown's No. 13 Harper in Section 23-10-1e, Winn Parish side of the Urania Pool, started off pumping 30 bbls. from a total depth of 1,510 feet.

One of three wildcat completions, Woodley Petroleum Co.'s No. 4-A Knight in Section 35-16-12, Caddo Parish (Caspiana district), was a small gasser—2,000,000 feet at 325 pounds, total depth 1,935 feet. Of the other two Southern Crude Oil Purchasing Co.'s No. 1 Christian, Section 22-23-6, Claiborne Parish, was abandoned as a dry hole at 3,006 feet and Sunday and others' No. 1 Security Trust in Section 6-23-1e, Union Parish, was abandoned as a duster at 2,300 feet where it had been standing since early in April.

R. W. Norton's No. 1 Fortner in Section 32-23-16, Caddo Parish, in which the Humble Oil & Refining Co. was interested, was abandoned in black shale

(Continued on Page 127)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

NORTH LOUISIANA

BIENVILLE PARISH

Company, farm and location—	Remarks:
W. G. Gray's No. 1 Snyder, SW NE, Sec. 15-17-6	Arranging to deepen; T.D. 2,924 ft.

BOSSIER PARISH

Corbett and others' No. 1 Murff, SE cor. NE Sec. 15-17-11	Shut down 990 ft.
Nell & Lanier's No. 1 Biedenharn, SE cor. Sec. 23-21-14	Washing to bottom; T.D. 790 ft.
Triangle Drlg. Co.'s No. 1 Thigpen & Herold, 1,320 ft. W, 660 ft. N, SE cor., Sec. 11-17-12	Cmtd. 12½-in; drlg. 868 ft.
Walker and others' No. 1 Antrim, NW cor. SE Sec. 28-22-13	Drilled 4 ft. deeper; bailed dry; T.D. 3,021 ft; S.D.
Woodmansee and others' No. 1 Bollinger, SE cor. NE Sec. 9-22-11	Shut down waiting orders 3,532 ft.

CADDO PARISH

D. C. R. Oil Co.'s No. 2 Oden, 892 ft. W. 264 ft. S. NE cor. NE NW, Sec. 20-19-14	Spudded July 24; 10-in. 82 ft; coring 2,400 ft.
Lide et als' No. 1 Levee Board, 200 ft. S. 200 ft. W. NE cor., Sec. 24-19-15	Rigging up.
Fred McWilliams' No. 1 Oden, 1,650 ft. S. 330 ft. W, NE cor., Sec. 20-19-14	Rig up.
S. T. Onyett, trustee's No. 1 Dixon, SW cor. Sec. 10-19-14	Show oil 868-88 ft; tested dry; drlg. 950 ft.
I. N. Pharis, trustee's No. 1 Oden, NE cor. SE NE Sec. 19-19-14	Rig up.
Haynes Bros., No. 1 Oden, NE cor. NW, Sec. 1919-14	Spudded July 28; 10-in. 100 ft; drlg. 2,380 ft.
Lide et als' No. 1 Hunter, 200 ft. S. 200 ft. E. NW cor., Sec. 22-19-14	Spudded Aug. 5; 10-in. 84 ft; drlg. 250 ft.
Ray-Dawes Drlg. Co.'s No. 2 Hunter, 330 ft. N, 330 ft. E, SW cor., Sec. 9-19-14	Drlg. hard rock 1,985 ft.
Simplex Oil Co.'s No. 1 Dickson, 660 ft. N. and E. C. Sec. 33-20-14	Tested dry 2,468 ft.; drlg. 2,590 ft.
A. H. Tarver's No. 1 Glassell & Dickson, 300 ft. N, 300 ft. E. SW cor., Sec. 31-20-14	Drlg. 2,450 ft.
Woodley Pet Co.'s No. 1-B Knight, Sec. 11-15-13	Arranging to deepen; total depth 1,936 ft.

CATAHOULA PARISH

Lochnager Petroleum Co.'s No. 1 Taliaferro, 572 ft. E 396 ft. S C Sec. 26-9-6	Shut down 900 ft.

CLAIBORNE PARISH

Nesbit et als' No. 1 Mosley, 330 ft. S, 330 ft. E, NW cor., Sec. 29-20-5	Cmtd. 10-in. 100 ft; drlg. 1,150 ft.
El Dorado Chief Oil Co.'s No. 1 Dance, C SW NE, Sec. 27-20-7	S.D. 1,115 ft.

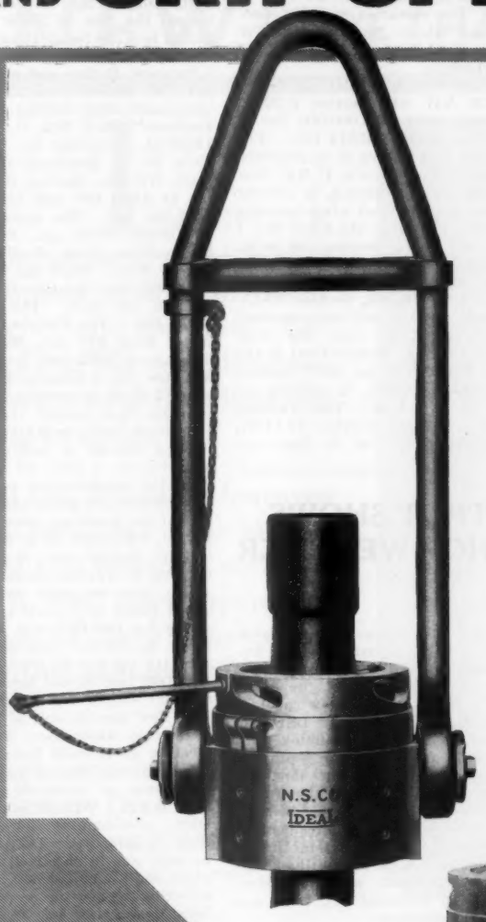
DESOTO PARISH

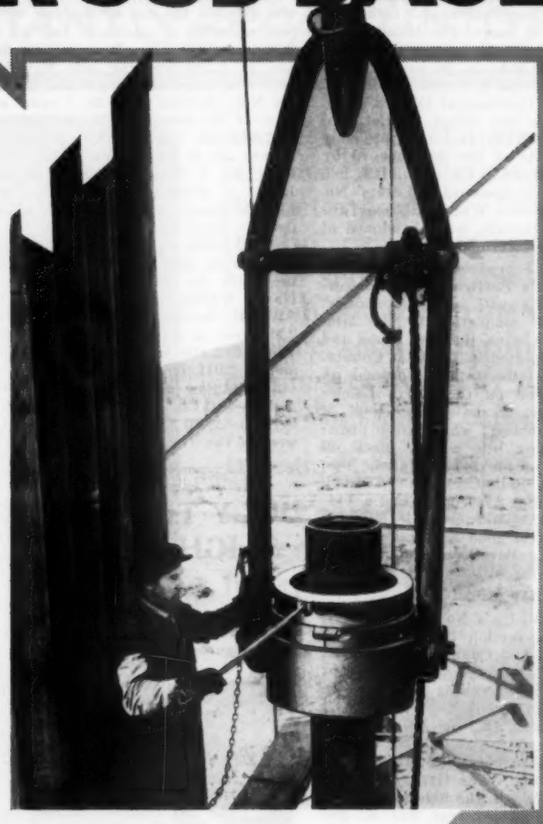
P. J. Becker, trustee's No. 1 Tull, SW cor. NE NE Sec. 22-12-15	Fishing 7 joints drill stem; T.D. 2,475 ft.
Benedum & Trees Oil Co.'s No. 2 State, 1,700 ft. S and 1,350 ft. W NE cor. Sec. 22-14-13	Drlg. lime 3,468 ft.

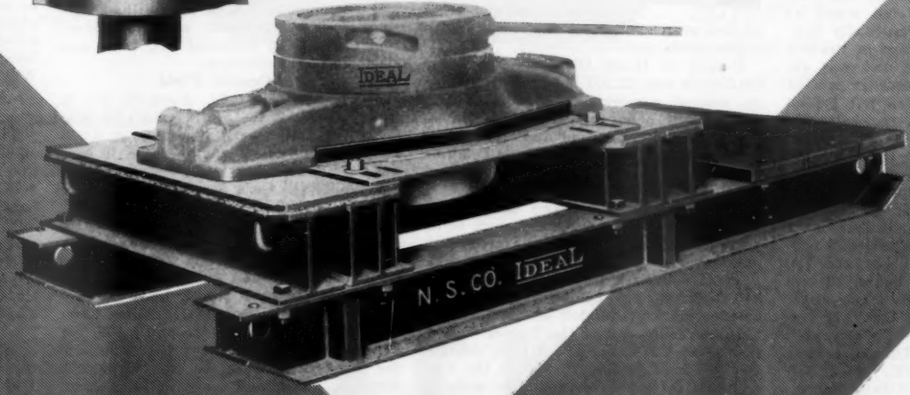
(Continued on Page 130)

IDEAL

AUTOMATIC GRIP ELEVATOR GRIP SPIDER AND GRIP SPIDER SUB BASE







THE NATIONAL SUPPLY COMPANIES

Lea County, New Mexico, Well a Puzzle

Higher on Structure but Missed Skelly Pay and Will Be Drilled Deeper. New Black Oil Field Northwest of Casper

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Aug. 12.—The Gypsy Oil Co.'s No. 1 Humphreys, an offset to the Skelly well in the Jal district in Lea County, New Mexico, proved to be somewhat of a puzzler as it is higher on the structure, but missed the Skelly pay. It will be drilled deeper. The Humble Oil & Refining Co.'s No. 1 Lindley, north of the Skelly and Gypsy wells, is listed as a completion and made 780 bbls. the first 24 hours. The Midwest Refining Co.'s No. 31 Capps, in the Hobbs area, made 550 bbls. in 24 hours, but is drilling deeper with hole full of oil from lower horizon. Continental Oil Co.'s No. 1 Flint, in the San Simis district, ran into water at 3,765 feet and probably marks the limits of the pool opened by the Texas Production Co.'s No. 1 Lynch on the northwest. Leonard & Levers' No. 1 Haggerty, in the West Maljamar district in Eddy County, was abandoned at 3,752 feet.

A test of the production in the Five Square Oil Co.'s Berthoud Dome discovery in Colorado will be made shortly. There was one completion by the Midwest Refining Co. on the Iles Dome and two failures reported in Fremont County.

Minneapolis interests have opened up a producing well on the North Casper Creek structure, 25 miles northwest of Casper, in Wyoming, which gives promise of developing into a new black oil field in spite of previous failures. Two completions in Salt Creek, a 1,773-bbl. well for Wyoming Associated, and a 144-bbl. well for the Midwest Oil Co. were reported. Several good completions were made in the La Barge district in southwestern Wyoming.

NEW MEXICO

The Gypsy Oil Co.'s No. 1 Humphreys, NW cor. SW, Section 25-25-36, in the Jal district in Lea County, southeastern New Mexico, has proved to be somewhat of a puzzle. This well is an offset on the east to the Skelly Oil Co.'s No. 1 Joyner, NE cor. SE, Section 26-25-36, the best well so far completed in that area, which made 850 bbls. initial when finished last May. The Gypsy well had 1,000 feet of fluid in the hole at 3,360-64 feet, of which 50 per cent was oil and the remainder water. This horizon correlates with the Skelly pay. It was then drilled down and encountered water at 3-385-4,000 feet, below the Skelly pay. The Gypsy well is the highest of the two based on sea level datum and was expected to be a good producer at present depth. The water has been put behind a string of 6¼-inch and the hole will be drilled deeper.

The Humble Oil & Refining Co.'s No. 1 Lindley, C NE NE, Section 23-25-36, north of the Skelly and Gypsy wells and an offset on the southeast to Cranfills & Reynolds' No. 1 Wilson, is listed as a completion at a total depth of 3,375 feet. It made 8,000,000 feet of gas and 780 bbls. of oil the first 24 hours, the oil coming from 3,361-75 feet. The elevation of this well is 3,097 feet. It bottomed the salt at 2,960 feet and topped the lime at 2,965 feet. This company's No. 1-B Lindley, C SE SE, Section 14-25-36, has rig up. The Midwest Refining Co.'s No. 22 Gregory, NW SE SW, Section 31-25-37, which had 70,000,000 feet of gas at 3,071 feet, has changed over to rotary equipment, killed the gas and is drilling at 3,123 feet. The Magnolia Petroleum Co.'s No. 1 Lindley, SE cor. NE, Section 26-25-36, is drilling in salt at 1,255 feet, the salt being topped at 1,230 feet. The Texas Production Co.'s No. 1 Shepherd, SE cor. NE, Section 6-26-37, which made around 1,500 bbls. a day at a total depth of 3,285 feet, has cemented at that depth and is waiting for it to set. Cores were taken below that depth.

Hobbs District

The Hobbs district in Lea County ranks close to the Jal area in activity. The Midwest Refining Co.'s No. 31 Capps, SW cor., Section 3-19-38, an offset on the northeast to the same company's discovery well, reported last week making 400 bbls. in the top of the pay at 4,030 feet, showed an increase and at 4,065 feet made 550 bbls. It is drilling deeper, and at 4,200 feet the hole was full of oil. The same company's No. 24 Leach, SE NW, Section 15-19-38, 3 miles southwest of the discovery, is drilling in salt at 2,612 feet, the top being at 1,830 feet. Rotary bit is being used. The Ohio Oil Co.'s No. 1 State, SE SW, Section 9-19-38, is drilling at 1,300 feet in red rock, a rotary operation. The Shell Petroleum Co.'s No. 1 Terry, SW NE, Section 22-19-38, is bottomed at 1,200 feet in red rock and has changed over to rotary. It is reaming an 18-inch hole. Harry Walker and others' No. 1 Terry, SW SE, Section 10-19-38, is drilling at 2,995 feet in lime. It topped the brown lime at 2,910 feet and had a show of gas at 2,912 feet.

In the San Simion district, the Continental Oil Co.'s No. 1 Flint, SE cor., Section 28-20-34, 1 mile to the northwest of the Texas Production Co.'s No. 1 Lynch, encountered water at 3,765-70 feet and does not look encouraging. The Texas Production Co.'s No. 2 Lynch, NW cor., Section 34-20-34, three-fourths of a mile to the northwest of the discovery, is moving in. C. E. Reynolds and others' No. 1 Merchant, SE cor. NE, Section 15-22-34, is bottomed at 690 feet in red rock and lowering the 15½-inch. Cranfill & Reynolds' No. 1-B State, NE cor., Section 2-21-33, is bottomed at 3,425 feet in brown lime where it set and cemented the 8¼-inch. It bottomed the salt at 3,370 feet and topped the brown lime at 3,410 feet. The elevation is 3,788 feet. Joe Cook and others' No. 1 State, NW NE, Section 12-21-33, is drilling at 2,995 feet in anyhydrite.

The Empire Gas & Fuel Co.'s No. 1 Closson, NE NW SE, Section 6-22-36, Eunice district, gauged 65,000,000 feet of gas at a total depth of 3,542 feet. The tools were lost and fishing is in progress. Bull & Hagen's No. 1 State, C NE, Section 33-11-35, Tatum district, is drilling at 1,740 feet in red sand after running the 6⅝-inch. The Ohio Oil Co.'s No. 1 McGeorge, SE NW, Section 30-20-33, Pearl district, is drilling in salt at 2,820 feet, and the Humble Oil & Refining Co.'s No. 1 Bowers, C NE SE, Section 30-15-38, Lovington district, set and cemented the 9⅝-inch at 2,950 feet, the total depth. The Texas & Pacific Coal & Oil Co.'s No. 2 State, NW cor. SW, Section 21-23-36, Ochoa district, is drilling at 2,945 feet in anhydrite. The Vacuum Oil Co.'s No. 1 State, Section 13-17-34, is bottomed at 4,900 feet in lime and running tubing and rods for a test. This well produced 125 bbls. a day in an upper horizon. The new oil came in at 4,820-24 feet and is estimated about 40 bbls.

Eddy County

In Eddy County, Leonard & Levers' No. 1 Haggerty, NW cor., Section 18-16-30, West Maljamar district, has been abandoned at a total depth of 3,752 feet. The well is 8 miles northwest of Flynn, Welch & Yates' No. 1 Jackson, the discovery well in this district. No. 1 Haggerty topped the salt at 462 feet and topped the lime at 2,680 feet. The elevation is 3,756 feet. It had several shows of oil and gas, but none commercial. Livermore, Parker and others' No. 1 Etz, SE NW NE, Section 25-16-30, has been abandoned after drilling to 60 feet. Etz Brothers' No. 1 Etz, C SE SE, Section 13-16-30, is moving in. The Pueblo Oil Co.'s No. 1 Robinson (formerly No. 1 Lee), NE cor., Section 34-17-29, is drilling at 2,920 feet and had a show of oil at 2,850 feet. The same company's No. 4 Russell, NW cor., Section 18-17-31, had another show of oil and gas at 3,360-68 feet. Total gas is estimated at 1,000,000 feet and the oil is standing 400 feet in the hole. The 6⅝-inch is at 3,275 feet. The Prairie Oil & Gas Co.'s No. 2 Keel, SW cor., Section 7-17-31, is drilling at 3,262 feet, and Flynn, Welch & Yates' No. 2 Gissler, SE cor. SW, Section 12-17-30, is drilling at 3,345 feet.

In De Baca County, the Transcontinental Oil Co.'s No. 1 McWhorter, SE NW, Section 6-3s-22, is drilling at 4,460 feet and showing a little oil and gas.

In the northwestern part of the state some drilling is going ahead intermittently, but no important developments are reported. Rumors of a deep test in the Gallup district in McKinley County, credited to various companies and about which there was some mystery, have been sifted down to a well to be drilled for water for the Rehoboth Mission in 15n-17w. A 114-foot steel derrick is up and a rotary rig will be used to drill to 1,600 to 2,000 feet in the hopes of developing a water supply for the mission.

A New Mexico unit of the Independent Petroleum Association was formed at a meeting at Roswell last week. This association was started as a result of the conference at Colorado Springs several months ago. Wirt Franklin, of Ardmore, Okla., president of the association, outlined its purposes. The principal objects, he said, are to obtain a tariff on oil imports and a modification of order No. 338 affecting prospecting on public lands. The New Mexico unit was organized with Van Welch, vice president, and William Dooley and Max Col as additional directors.

UTAH

The Continental Oil Co.'s No. 1 Boundary Butte, Section 22-43-22, San Juan County, southeastern Utah, is making new hole very slowly on account of depth and heavy gas pressure, but has not shown any material change. At last reports it was drilling at 5,360 feet in brown lime, only 20 feet having been made during the past week. The Phillips Petroleum Co.'s No. 1 Shick, C NE, Section 16-27-16, Wayne County, is bottomed at 5,200 feet in sand and has a hole full of new water. Roads in that vicinity are reported washed out by the heavy rains. The Utah Southern Oil Co.'s No. 1 King, Section 13-23-20, Salt Valley Dome in Grand County, is bottomed at 3,829 feet in black shale and is swedging out some minor kinks in the 6¼-inch at around 3,000 feet. The Cisco Springs Drilling Syndicate's No. 1, Section 9-20-23, is drilling at 1,270 feet, and the Diamond

(Continued on Page 111)

JULY TURNER VALLEY OUTPUT SHOWS SLIGHT DECLINE DUE TO HOT WEATHER

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, August 10.—Official figures of the July output of the Turner Valley Field show a slight decline compared with June. The July production totaled 91,840 bbls., compared with 92,122 bbls. in June which was a new high record. The decline in July was apparently due to the excessively hot weather, which resulted in a marked evaporation and reduced materially the crude naphtha recovery.

Output of Home Oil Co.'s No. 1 for the month was 22,201 bbls., nearly double its nearest competitor. Home's No. 2, with 11,801 bbls., and Royalite's No. 4, with 11,485 were second and third while Royalite's Nos. 8, 17 and 18 and Okalta's No. 1 and McLeod's No. 4 all averaged over 100 bbls. a day. Okalta's No. 1 showed a decline of nearly 2,000 bbls., but this was due to necessary work being done on the well which interfered with normal production.

Total deliveries from the field of 91,840 bbls. for the month represent an average daily production of 2,962 bbls.

In the south end of the Turner Valley, Home Oil Co.'s No. 3, LSD 14, Section 20-19-2w5, is drilling 75 feet in the lime at about 5,108 feet depth, after striking a wet gas flow estimated 7,000,000 feet a day. This is stated to be larger than the production encountered in No. 1 at a similar depth.

Mayland Oil Co.'s No. 2, LSD 8, Section 17-19-2w5, being drilled by Imperial Oil, Ltd., encountered a show of dark crude in the Dakota at 1,700 feet. The test is being drilled deeper into the sand, after bailing about a barrel. The Dakota is apparently higher in the Mayland area than in other parts of the south field, and a relatively shallow pool is indicated. Mayland's No. 1, LSD 10, same section, is reported resuming with rotary at 5,045 feet. At this depth the test had not yet reached the lime but had a show of light crude in the Fernie shales. At a recent directors' meeting, A. H. Mayland was elected president of Mayland Oil Co., with F. R. MacDonald vice president and A. J. MacWilliam secretary. J. H. McLeod, western production manager of Imperial Oil, Ltd., was elected general manager.

In Central Field

In the central field, Foothills Oil & Gas Co.'s No. 2, LSD 8, Section 1-20-3w5, is drilling 316 feet in the lime at 4,673 feet with only a slight increase in wet gas.

Royalite Oil Co.'s No. 6, LSD 16, Section 31-10-2w5, is reported to show a partial recovery of production, after removing a part of the lost tools and damaged casing at 4,531 feet. The well has a production around 200 bbls. a day.

McLeod Oil Co.'s No. 4, LSD 16, Section 1-20-3w5, is reported drilling 1,400 feet in the deep lime at around 5,100 feet depth. The gas flow shows some increase, the pressure blowing the cuttings out of the hole. The well made 2,116 bbls. on partial production in July, averaging around 120 bbls. a day from the lower lime horizon when it was not drilling. McLeod's Nos. 1 and 2 made 1,555 bbls. for the month, chiefly from No. 1; No. 2 is to be deepened to the lower production, but is shut down till No. 4 is fin-

(Continued on Page 123)

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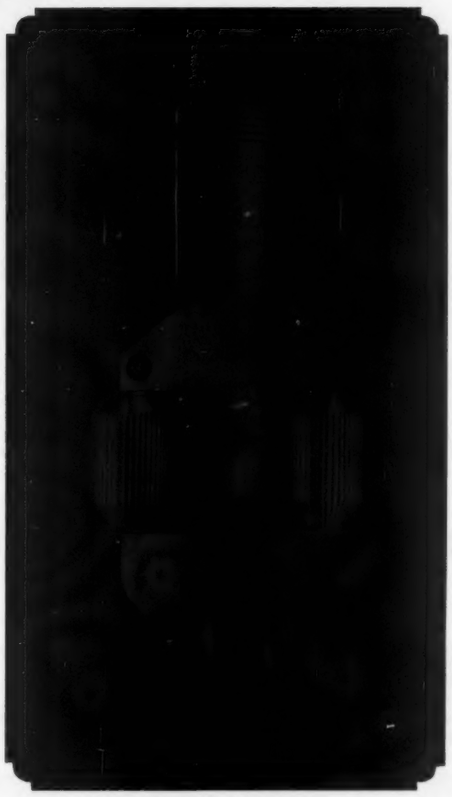

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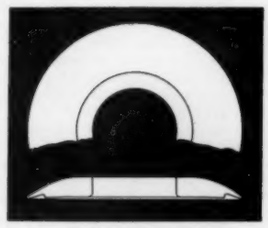

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California May Need New Storage

If Production Is Not Reduced Additional Tankage Will Soon Be Required. Gas Law to Be Initiated About September 10-15

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Aug. 10.—California marketers have reached a crisis is somewhat similar to that which existed in 1923 when everyone was obliged to construct additional storage in order to cope with the ever-increasing deluge of light refining crude resulting from simultaneous development of the Long Beach, Huntington Beach and Santa Fe Springs Fields. Several of the larger companies are again rapidly reaching the critical stage due to lack of storage facilities to care for flush production coming from Santa Fe Springs and other prolific areas and it is a foregone conclusion that additional tankage must either be erected in the near future or production pinched back. The Texas Company found it necessary to augment existing facilities several months ago and erected twenty 180,000-bbl. steel tanks at the Cypress tank farm to take care of surplus production but successful aggressive deep-zone development at Santa Fe Springs made a further addition necessary.

Operators are naturally reluctant to undertake the construction of any large amount of additional tankage at this late stage as this will not be needed when the recently enacted gas conservation law becomes effective. It has been the general consensus of opinion for some time that the new gas law would probably not become effective for several months but recent developments indicate no time will be lost in enforcement work after the dead line of September 1 has been reached. If anyone still anticipates a long drawn out debate while the usual proverbial red tape is unwound he will probably be a much wiser person within a short time after September 1. The recent emphatic announcement of Fred G. Stevenot, director of natural resources, that the State will pursue an aggressive attitude with respect to the new law as soon as the dead line has been passed should set at rest any expectation of indifference towards the new gas law by State officials.

Enforcement Date

Actual enforcement of the new gas law will probably not be initiated until along about the 10th or 15th of September, as a little extra time is expected to be allowed operators to get on a satisfactory operating basis. No definite move has yet been made to revive the Santa Fe Springs repressuring program or to apply similar conservation work in other districts but something tangible should develop within a few weeks. As the time approaches for actual enforcement of the new gas law belligerent operators are being converted to the advisability of regulated production as the advantages which must necessarily accrue from an equitable application are becoming more obvious from day to day. State officials charged with enforcement of the stipulations and regulations of the new bill are making a special effort to arrive at an equitable basis for work and thus eliminate any obstacle which might jeopardize the validity or constitutionality of the measure as too much is at stake.

While commenting on the probable early enforcement of the new gas conservation law, it might not be amiss to mention again that Senate Bill No. 560 is primarily a gas conservation measure and does not in any way attempt to regulate the production of crude oil, but any reduction in the production of natural gas will be simultaneously reflected in a sympathetic reduction in crude oil production, as all natural gas produced at present is a casinghead gas produced in conjunction with crude oil. One of the most interesting features in connection with the new gas law, which technically becomes effective three weeks from today, is the projected method of application. It was the original intention of State officials to tackle Santa Fe Springs first because of its dominating position but recent developments tend to indicate that the new gas bill will be applied in all fields simultaneously as far as practicable. The advantage of such a policy is quite evident because natural gas is being transmitted several hundred miles, natural gas lines extending all the way from Ventura Avenue to Los Angeles and from the latter point northward to Midway-Sunset, Kettleman Hills and other San Joaquin Valley Fields, with additional distributing lines under construction to the San Francisco Bay region. Any attempt to regulate the production of each field separately without giving due consideration to domestic requirements of public utilities would develop too many ramifications to result in smooth operation. It is probable, therefore, that State officials will give serious consideration to the origin and distribution of natural gas.

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	157,603	22,515	879,835	2,565,422
Fuel oil	.....	.....	.....	.....	49,950	111,621
Diesel and gas oil	71,092	10,156	75,750	10,821	1,060,042	1,298,502
Gasoline	604,278	86,325	459,431	65,633	12,724,821	8,029,422
Naphtha distillate	.....	.....	.....	.....	81,750	171,250
Coastwise—						
Crude oil	887,473	126,782	832,683	118,955	15,306,454	14,827,783
Fuel oil	439,622	62,803	421,014	60,145	12,931,934	10,300,051
Diesel and gas oil	.....	.....	2,510	359	741,696	714,115
Gasoline	299,732	42,819	263,607	36,230	6,805,048	5,099,932
Kerosene	.....	.....	1,425	204	39,582	52,884
Naphtha distillate	.....	.....	.....	.....	.....	171,566
Exports—						
Crude oil	194,657	27,808	63,972	9,139	3,435,037	1,441,771
Fuel oil	229,889	32,841	267,920	38,274	11,388,329	14,673,283
Diesel and gas oil	.....	.....	15,047	2,150	1,480,206	1,620,301
Gasoline	341,987	48,855	434,125	62,018	6,850,233	3,908,440
Kerosene	.....	.....	156,372	22,339	1,929,378	2,688,544

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	.....	342,425
Gasoline	.....	.....	.....	.....	1,264,942	1,357,567
Lubricants	.....	.....	.....	.....	69,172	277,151
Coastwise—						
Fuel oil	44,510	6,359	140,400	20,057	1,787,253	2,566,631
Diesel and gas oil	8,518	1,217	.....	.....	334,753	169,039
Gasoline	161,167	23,024	83,290	11,899	3,130,809	2,858,451
Kerosene	6,630	947	.....	.....	92,036	163,795
Exports—						
Crude oil	.....	.....	.....	.....	121,603	85,935
Fuel oil	.....	.....	64,550	9,221	529,011	1,566,766
Diesel and gas oil	.....	.....	.....	.....	155,474	10,400
Gasoline	140,060	20,009	276,441	39,492	3,589,320	3,006,429
Kerosene	.....	.....	.....	.....	382,417	362,852
Lubricants	.....	.....	.....	.....	21,899	11,400

Potential Reduction

State production of crude oil has been greatly in excess of normal requirements for several months with the result that purchasers of crude have been obliged to store large quantities of crude and refined oil in addition to that exported to foreign ports or sold domestically on the Atlantic Seaboard and Gulf Coast. This surplus production is of special importance as enforcement of the new gas law will probably reduce State production to a very substantial extent if successfully applied. It is probable that the output at Santa Fe Springs may be reduced 50 per cent and Long Beach, Ventura Avenue and Elwood, somewhere around 25 per cent. The possible reduction in these four fields may approximate 200,000 bbls. daily, in which event State production would be cut to approximately 675,000 bbls. per day, or roughly, the amount needed to fulfill normal requirements and sales commitments. A further reduction may be accomplished by restricting production at Seal Beach and other fields showing an excess of production of natural gas. It is hoped the new gas law will stand the test of time and accomplish the desired results as a successful application will preclude an impending cut in crude and refined oil prices, which is bound to occur if production continues unregulated. Marketers cannot continue to store large quantities of crude and refined oil indefinitely as the economic limitation is not far away. Typical Santa Fe Springs crude of 33 degrees commands a price of $1.35 per barrel at present. Steel tankage adds another 50 cents per barrel, so that every barrel stored represents an investment of $1.85, exclusive of pipe line transportation costs and carrying charges involving insurance, losses from evaporation and a fair return on money invested.

Santa Fe Springs

Production at Santa Fe Springs was back up again this week, following a drop for two consecutive weeks, and it is likely a further increase may take place next week as there are quite a large number of new wells scheduled for completion. In any event, Santa Fe Springs production will continue at a high rate, at least until the recently enacted gas conservation law becomes effective, due to aggressive deep-zone development and, while the daily output will fluctuate from time to time due to new completions, no abnormal drop is anticipated within a month. The gas law will automatically reduce crude oil production to a substantial extent and this factor should not be overlooked as it is expected to become effective early in September unless some unforeseen delay is encountered. Clarke zone development is becoming general throughout the field and this work will probably be reflected in State production later this year. Up to the present operators have been concentrating on the O'Connell zone but within the past week tentative programs have been arranged for deeper drilling and this should take definite form soon with the starting of perhaps 25 or more new wells which will have the Clarke, Hathaway or deeper horizons as their objective. Clarke zone development has not been signally successful up to the present as most of the wells finished in this horizon have been located out on the flanks of the structure. The Texas Company, General Petroleum and Union, which hold favorably located acreage on the apex of the structure, are expected to augment their present drilling programs by starting additional wells for lower zone development soon. All indi-

MOUNT PLEASANT LEADS IN ACTIVITY, BUT MUSKEGON IN COMPLETIONS

By Special Correspondent

MUSKEGON, Mich., Aug. 10.—The Muskegon Field continued to lead developments in Michigan during the week with the largest number of completions and the greatest amount of new initial production although the average production of the successful wells completed fell slightly below the record of the Mount Pleasant Field.

Eight new wells, seven of which were completed in the Dundee pay sands, added 1,860 bbls. of initial production to the Muskegon Field. Three new wells, all in the Dundee formation, made a total of 725 bbls. of initial production in the Mount Pleasant Field.

The average of the wells in the Muskegon Field was 232.5 bbls., while the average for the three new Mount Pleasant wells was 241.6 bbls. The largest well was in the Muskegon Field making more than 1,000 bbls. initial daily flow. This is as much or more than the largest well ever completed in the Mount Pleasant Field where there is comparatively little gas to flow the wells compared with the western Michigan Field. One Muskegon well had an estimated daily flow of 5,000,000 feet of natural gas along with 100 bbls. of oil.

In new locations the list of nine for the Mount Pleasant Field and vicinity compared with only two for the Muskegon Field gives indication that the center of drilling activity is in the central Michigan Field.

The largest new completion was the Henley Oil Co.'s No. 2 Bortz-Koning, NW SW, Section 7-10-16, Muskegon, which made more than 1,000 bbls. initial in the Dundee at 2,028-30 feet. The Swastika Oil & Gas Co.'s No. 3 Martin Berkema, NW NW, Section 8-10-16, made 5,000,000 feet of gas and about 100 bbls. of oil at 2,008-20 feet. Thompson Brothers' No. 2 Henry Smeltekep, NW SW, Section 5-10-16, made about 200 bbls. initial at 2,042-47 feet. Fleeger-Olson Association's No. 1 Koloritz, NE NE, Section 21-10-16, will make a small pumper of about 5 or 10 bbls. in the lower Traverse.

In Laketon Township, Republic Oil Co.'s No. 3 George S. Brand, SE SE, Section 11-10-17, made 400 bbls. from the Dundee. Johnson Oil Refining Co.'s No. 1 Cihak, NE NE, Section 12-10-17, a deepened hole, made about 75 bbls. initial at 2,053-56 feet. Dollie Mae Damm's No. 4 Carl P. Damm, SW SW, Section 12-10-17, will make less than 50 bbls. a day on the pump. Dixie Oil Co.'s No. 1 Nellie King, SW NW, Section 11-10-17, will make 30 bbls. initial on the pump.

The Great Western Oil & Gas Co. abandoned No. 1 Cecil F. Warren. The Bear Lake Oil Co. also abandoned No. 1 H. Jacobson estate, NW SE, Section 14-10-17, Laketon Township.

A rig has been erected for William H.

(Continued on Page 125)

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cations point to large production in the Clarke or deeper zones on top of the structure and this work will naturally be an important factor in future State production.

There were several good wells finished this week, in contrast with irregular completions and small initial daily production secured during the past fortnight. The best well finished was the Union Oil Co.'s No. 11 Howard, which came in flowing 4,000 bbls. per day from the O'Connell zone at 6,856 feet but which subsequently built up to 6,575 bbls. This company has six more deep-zone producers scheduled for early completion, three of which, Nos. 12, 13 and 14 on the Farwell property, should be tanking oil within a few days. The Bandini Petroleum, which has finished several deep-zone producers during the past month, brought in a new well, No. 15 Off, flowing 4,400 bbls. from 6,825 feet. The General Petroleum, which is running 74 strings of tools in the Santa Fe Springs Field, is plugging back No. 113 Jalk, following an unsuccessful preliminary test at 8,363 feet, at which point salt water prevented commercial production.

Santa Fe Springs Completions

The completion list at Santa Fe Springs was made up of O'Connell zone wells for the most part but also included two wells finished in the deep Clarke zone, which underlies the former horizon. These were the Universal Consolidated Oil Co.'s No. 3 O'Connell, which showed an initial of 3,680 bbls. from 7,714 feet, and the Shell company's No. 2-B Slusher, which tanked 1,995 bbls. of unusually clean 35.1 gravity oil from 7,770 feet. In addition to finishing No. 2-B Slusher, the Shell recompleted No. 13 Golay flowing 2,430 bbls. daily from the O'Connell zone at 6,845 feet. George F. Getty finished two new wells and is putting the finishing touches on several others. No. 32 was an accidental completion as it blew in prematurely doing 4,025 bbls. daily from 6,238 feet with only 10 feet of formation open below the water string landed at 6,228 feet. No. 34 was a normal completion, and showed an initial of 4,460 bbls. from the O'Connell zone at 6,980 feet. The Texas Company, which has experienced considerable success in deep-zone development at Santa Fe Springs, recompleted two former upper-zone producers after redrilling and deepening them to the lower horizon. One was No. 2-B Wickman, returned to production flowing 1,280 bbls. from the Nordstrum zone at 5,315 feet. No. 4 Weaver was a normal completion in the O'Connell horizon and tanked 3,472 bbls. daily from 6,842 feet. A preliminary test on The Texas Company's No. 6 Steinley failed to resut in commercial production from the Clarke zone at 8,020 feet as the initial daily output, 5,000 bbls., was cutting 50 per cent water. The Standard Oil Co., with 28 strings of tools in operation, successfully finished No. 26 South Whittier Community doing 1,600 bbls. from the upper O'Connell at 6,529 feet. The Union Oil Co. displaced the General Petroleum as the largest single producer and will strengthen its position by completing several more wells during the week. The Union company is running 53,000 bbls. of pipe line oil daily, followed by General Petroleum with 48,000 bbls., The Texas Company with 40,000 bbls., Bandini Petroleum with 30,000 bbls., George F. Getty with 20,000 bbls., Wilshire with 15,000 bbls., Shell with 14,000 bbls., Standard with 13,000 bbls., and Associated with 10,000 bbls.

Wildcat Exploration

California operators are setting a fast pace so far as wildcat exploration work is concerned and recent developments indicate probability that one or more new fields will be opened up before the year draws to a close. Prospecting work is practically statewide with several particularly promising areas undergoing intensive exploration. The General Petroleum focused the attention of operators on the Santa Barbara district when its No. 1 More, a wildcat approximately 4 miles east of the prolific Elwood Field of Santa Barbara County, and a similar distance west of the Santa Barbara Field, blew in out of control flowing about 30,000,000 feet of natural gas daily from 4,533 feet. This wildcat, the hole of which is open below 2,590 feet where a string of 11¾-inch has been landed and cemented, has shown unusually heavy gas pressures for several weeks. The flow of gas, which increased to approximately 40,000,000 feet daily, was killed subsequently with heavily fortified drilling mud and the possibility of developing commercial crude oil production is still undetermined. No oil accompanied the gas production, although a distinct gasoline odor was noticeable.

The showing of No. 1 More justifies additional exploration in the immediate vicinity and it is likely the General Petroleum will start another test if No. 1 More fails to result in commercial production with additional work. In the meantime the company is stepping out west of the Elwood Field and will drill a wildcat on the 350-acre Erburo property held jointly with the Shell Oil Co. This lease is approximately 3 miles west of the Elwood Field of Santa Barbara County and approximately 7 miles west of No. 1 More, which blew in early in the week. The Barnsdall Oil Co., which has experienced exceptional success in the Elwood Field of Santa Barbara County, is also testing out the area west of this field. The Barnsdall recently started a new wildcat on the Edwards anticline, which is in reality a continuation of the Tecolote anticline developed by E. J. Miley a few years ago. The new well recently started by the Barnsdall on the Edwards lease, just west of the little town of Naples situated approximately 5 miles west of Elwood, is the third project drilled by this company in its effort to develop commercial production. The first two wells drilled were started about two years or so ago just after E. J. Miley had developed production on the Tecolote anticline. These wells were dry holes but the Bransdall was sold on the possibilities of this area and its perserverance was rewarded when that company opened up the Elwood Field to the south in conjunction with the Rio Grande some time later. The first two wells which the Barnsdall drilled on the Edwards property failed to get production in the Sespe formation, which has not yet been found productive in Santa Barbara County, and it begins to look as though No. 3 Edwards will experience a similar fate as the 325 feet of Vaqueros overlying the Sespe in this hole was barren.

Promising Wildcat

The Western Gulf Oil Co. has been working for months on a very promising wildcat at the foot of Gaviota Pass on the 22,000-acre Hollister ranch, and, while progress has been rather slow, it would not be at all surprising if success ultimately crowned the efforts of the company in this vicinity. This well blew out a month or two ago flowing around 25,000,000 feet of natural gas daily and was only subdued several days later by the use of considerable quantities of hematite. After being brought under control a water witch indicated water was entering the hole below the 10-inch which had been landed and cemented at 3,088 feet. To correct this trouble the company recently landed a string of 8⅝-inch at 3,152 feet and preparations are under way to make an early production test. The structure being tested out by the Western Gulf appears to be rather limited in extent and should prove inferior to the Elwood anticline.

The Continental Oil Co. has experienced a somewhat similar situation in its wildcat exploration at Carpenteria. This company, it will be recalled, was forced to suspend drilling operations on No. 1 Baillard several months ago following a disastrous gas blowout due to the exceedingly high gas pressure, 1,800 pounds, which existed even after the well had been mudded off. A second test, a few hundred feet northeast of the original hole, was rotating ahead a few days ago at 4,580 feet and while considerable gas and some encouraging streaks of oil sand had been logged from time to time, the outcome is still in doubt. The second hole is checking out somewhat deeper than the initial test, leading to the belief that production may be expected either westward or out in the open ocean. The geology of this area presents a rather interesting study, especially because other California operators have passed it up as not holding any special promise of success. It is needless to say the exceptionally heavy gas pressure, 1,800 pounds, still present in the Continental's initial hole, has proved somewhat surprising to many producers. The large volume of gas encountered is

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IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well, location—	S-T-R	Depth	Status
Standard, No. 5-9 Saticoy, Ventura Co.	10- 2-22	7,585	fishing
American Oil Co., No. 1 Camarillo, Ventura Co.	33- 2-20	1,208	suspended
Bolsa Chica, No. 1-A Temescal, Ventura Co.	4- 4-13	701	br. sh. drilling
Associated, No. 1 Rincon, Ventura Co.	19- 4-24	.....	location
Miley, E. J., No. 2 Red Mountain, Ventura Co.	7- 3-23	1,670	hd. sd. drilling
Shell, No. 1 Simi, Ventura Co.	31- 3-17	3,371	hd. sd. drilling
Continental, No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	3,765	suspended
Continental, No. 2 Sulphur Mountain, Ventura Co.	22- 4-22	6,740	suspended
Continental, No. 3 Sulphur Mountain, Ventura Co.	21- 4-22	2,100	br. sh. drilling
Lockwood Oil Co., Well No. 1, Ventura Co.	28- 8-21	250	sd. sh. drilling
Milham Explt'n., No. 1-A Buttonwillow, Kern Co.	8-28-23	4,662	gas well, idle
Milham Explt'n., No. 2 Buttonwillow, Kern Co.	8-28-23	2,730	gas well, idle
Milham Explt'n., No. 3 Buttonwillow, Kern Co.	8-28-23	2,694	gas well, idle
Milham Explt'n., No. 4 Buttonwillow, Kern Co.	6-28-23	2,670	gas well, idle
Milham Explt'n., No. 5 Buttonwillow, Kern Co.	5-28-23	2,500	gas well, idle
Milham Explt'n., No. 6 Buttonwillow, Kern Co.	8-28-23	2,676	gas well, idle
Milham Explt'n., No. 7 Buttonwillow, Kern Co.	6-28-23	2,720	suspended
Milham Explt'n., No. 8-A Buttonwillow, Kern Co.	8-28-23	2,673	gas well, idle
Milham Explan., No. 9 Buttonwillow, Kern Co.	8-28-23	2,400	hd. sd. drilling
Milham Explt'n., No. 10 Buttonwillow, Kern Co.	8-28-23	2,672	fishing
Lincoln Drlg. Co., No. 1 Buttonwillow, Kern Co.	6-28-23	190	suspended
Richfield Oil Co., No. 2 Semitropic, Kern Co.	36-27-23	7,618	testing
Stabler, W. W., No. 1 Comanche Point, Kern Co.	23-32-29	3,409	suspended
Elmer Oil Co., No. 1 Bena, Kern Co.	15-30-30	3,000	suspended
Elmer Oil Co., No. 1-A Rosedale, Kern Co.	33-29-26	3,970	sd. sh. drilling
Taft Drlg. Co., No. 1 Union Avenue, Kern Co.	2-30-27	4,393	sd. sh. drilling
The Texas Company, No. 1 Edison, Kern Co.	23-29-27	.....	location
Shell Oil Co., No. 1 Lerdo, Kern Co.	5-29-27	4,190	testing
General Pet., No. 1 McFarland, Kern Co.	25-26-25	5,960	br. sh. drilling
Union, No. 2 San Emidio, Kern Co.	5-10-21	3,670	suspended
Currency Pet. Co., No. 1 Jacalitos, Fresno Co.	28-21-14	2,302	suspended
Currency Pet. Co., No. 2 Jacalitos, Fresno Co.	14-21-14	350	redrilling
Hornaday & Huggins, No. 1 Kerman, Fresno Co.	32-14-18	3,715	suspended
Cates Oil Co., No. 1 Joaquin Ridge, Fresno Co.	7-19-15	114	suspended
Oceanside Oil Co., No. 1 Krayenhagan, Fresno Co.	33-22-17	738	redrilling
Petroleum Securities, No. 1 Kerman, Fresno Co.	20-20-16	695	sd. sh. drilling
Petroleum Securities, No. 2 Kerman, Fresno Co.	28-20-16	4,685	sd. sh. drilling
Pismo Dome Oil Co., No. 1 Pismo, San Louis Obispo Co.	5-32-13	1,120	sd. sh. drilling
Union, No. 1 Huasna, San Luis Obispo Co.	34-32-15	3,700	redrilling
Union, No. 1 North Huasna, San Luis Obispo Co.	12-32-14	3,760	br. sh. drilling
Midwest Refining Co., No. 1 Huasna, San Luis Obispo Co.	34-31-15	2,025	fishing
Panorama Oil Co., Well No. 1, San Luis Obispo Co.	7-31-21	3,971	br. sh. drilling
Paso Robles Synd., No. 1 Paso Robles, San Luis Obispo Co.	27-27-11	2,718	br. sh. drilling
Shell, No. 5 Guadalupe, Santa Barbara Co.	25-10-35	1,750	hd. sd. drilling
Shell, No. 2 Goleta, Santa Barbara Co.	36- 5-31	5,315	sd. sh. drilling
Petroleum Securities, No. 1 Goleta, Santa Barbara Co.	.....	3,874	sd. sh. drilling
Union, No. 1 Buel Canyon, Santa Barbara Co.	X- 7-31	1,622	redrilling
O'Neil, L. B., No. 1 Los Alamos, Santa Barbara	26- 8-33	2,591	sd. sh. drilling
Western Gulf, No. 1 Gaviota, Santa Barbara Co.	X- 5-33	3,170	recemented
Richfield, No. 1 Point Conception, Santa Barbara Co.	X- 5-35	.....	location
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	2,428	idle, litigation
Standard, No. 1 Point Arguello, Santa Barbara Co.	4- 7-35	418	sd. sh. drilling
Gaviota Oil Co., No. 1 Lompoc, Santa Barbara Co.	9- 7-35	Rig	rigging up
Barnsdall, No. 3 Goleta, Santa Barbara Co.	1- 4-30	1,806	sd. sh. drilling
General Pet., No. 1 Elwood, Santa Barbara Co.	21- 4-28	4,533	gas blow out
General Pet., No. 2 Elwood, Santa Barbara Co.	5- 4-30	.....	location
Pacific Western, No. 1 Naples, Santa Barbara Co.	7- 4-29	3,806	rd. sd. drilling
System Oil Co., No. 1 Orcutt, Santa Barbara Co.	36-10-34	4,120	sd. sh. drilling
Keystone Oil Co., No. 1 Santa Maria, Santa Barbara Co.	33-10-34	1,411	sd. sh. drilling
Wildcat Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	1,351	sd. sh. drilling
Keystone Oil Co., No. 1 Surf, Santa Barbara Co.	18- 7-35	761	cemented
Channel Oil Co., Well No. 1, Santa Barbara Co.	29- 4-27	6,304	suspended
Channel Oil Co., No. 1 Fellowship, Santa Barbara Co.	29- 4-27	1,430	gr. sd. drilling
Pacific Western, No. 1 Gibralter, Santa Barbara Co.	9- 5-27	.....	building road
Continental, No. 1 Carpenteria, Santa Barbara Co.	33- 4-25	4,130	gas well
Continental, No. 2 Carpenteria, Santa Barbara Co.	33- 4-25	4,580	oil show
Colusa Oil Co., Well No. 1, Colusa Co.	31-15- 4	625	hd. sd. drilling
Italo American, Well No. 1, Colusa Co.	20-13- 3	785	suspended
North Counties Oil Co., Well No. 2, Humboldt Co.	36- 2- 1	2,205	suspended
Humboldt Oil Co., Well No. 1, Humboldt Co.	6- 2- 1	3,041	suspended
Applegate & Renshaw, Well No. 1, Merced Co.	24- 6-10	3,750	suspended
Kuhns, H. L., Well No. 1, Merced Co.	8-12-19	660	suspended
Foster & Hammil, Well No. 1, Alameda Co.	21- 3- 3	1,130	hd. sd. drilling
Calhoma Oil Co., No. 1 Livermore, Alameda Co.	9- 3- 3	1,549	suspended
Shell, No. 1 Dudley, Monterey Co.	15-22- 9	3,790	gr. sd. drilling
Union, No. 1 San Lucas, Monterey Co.	8-22- 8	1,477	hd. sd. drilling
Standard, No. 1 King City, Monterey Co.	23-22- 7	120	sd. drilling
Marland, No. 1 Bradley, Monterey Co.	32-24-11	6,930	suspended
Tuck Oil Co., No. 1 Los Gatos, Santa Clara Co.	15- 8- 1	852	suspended
Dudley Ridge Synd., No. 1 Tulare, Kings Co.	12-23-19	1,305	gas, shut in
Porter, H. B., No. 1 Devils Den, Kings Co.	9-24-17	202	sd. drilling
O'Donnell, J. E., No. 1 Tulare, Kings Co.	7-23-20	Rig	suspended
Associates Pet., No. 1 Lewis Creek, San Benito Co.	9-19-10	501	suspended
Twin States Oil Co., No. 1 Soldani, Mendocino Co.	14-12- 7	694	hd. sd drilling

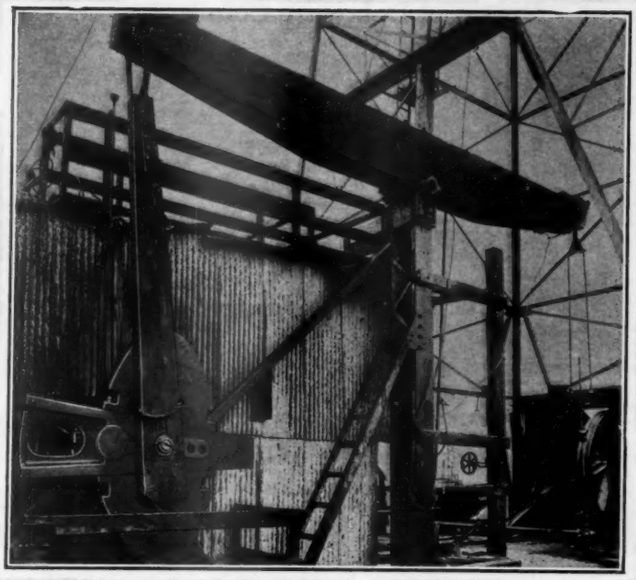
IMPORTANT SOUTHERN CALIFORNIA WILDCATS

The Texas Company, No. 1 Clearwater, Los Angeles Co.	8- 4-12	4,040	sd. sh. drilling
Standard, No. 1 Hawthorne, Los Angeles Co.	5- 3-14	6,670	gr. sd. drilling
Hummel, Joseph, No. 1 Redondo, Los Angeles Co.	28- 3-14	.....	location
Ohio Oil Co., No. 1 Del Rey, Los Angeles Co.	21- 2-15	419	sd. drilling
Jackson, R. B., No. 1 Watts, Los Angeles Co.	8- 3-13	1,477	suspended
Burlingham Pet., Co., No. 1 Compton, Los Angeles Co.	17- 3-13	2,204	cleaning out
Lee & Brainard, No. 1 Rosecrans, Los Angeles Co.	17- 3-13	Rig	suspended
Johnson, D. W., No. 1 Compton, Los Angeles Co.	21- 3-13	.....	foundation
Hanners, George, No. 1 Watts, Los Angeles Co.	8- 3-13	Rig	rigging up
Jackson, R. B., No. 1 aWtts, Los Angeles Co.	8- 3-13	Rig	suspended
Calif. Well Drlg. Co., No. 1 Compton, Los Angeles Co.	11- 4-13	7,662	resume work
Hansen, N. J., No. 1 Watson, Los Angeles Co.	17- 4-13	Rig	suspended
Pugh Miller Drlg. Co., No. 1 Calabasas, Los Angeles Co.	6- 1-17	2,550	suspended
Russell Oil Co., No. 2 Joughin, Los Angeles Co.	25- 3-17	1,704	suspended
Pomona Oil Co., Well No. 1, Los Angeles Co.	32- 1- 8	1,220	hd. sd. drilling
Beard, G. F., No. 1 Brea Canyon, Los Angeles Co.	30- 2- 9	930	sd. sh. drilling
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,820	suspended
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	2,001	gr. sd. drilling
Urmi Oil Co., No. 1 Puente, Los Angeles Co.	31- 2- 8	775	redrilling
Shell, No. 1 Coyote, Los Angeles Co.	28- 3-10	4,709	sd. sh. drilling
Prairie Oil Co., No. 1 Montebello, Los Angeles Co.	32- 1-12	4,730	sd. sh. drilling
Monterey Park, No. 1 Jepson, Los Angeles Co.	25- 1-12	5,002	gr. sd. drilling
West, L. M., No. 1 El Monte, Los Angeles Co.	16- 1-11	129	sd. drilling
Union Oil Co., No. 1 Richfield, Los Angeles Co.	13- 3- 9	814	hd. sd. drilling
Southwestern Drlg. Co., No. 1 Richfield, Los Angeles Co.	21- 3- 9	5,777	cemented
Queen, J. M., No. 1 Newhall, Los Angeles Co.	22- 3-16	230	suspended
Anderson, P. B., No. 1 Hasley Canyon, Los Angeles Co.	1- 3-16	530	hd. sd. drilling
So. Calif. Drlg. Co., No. 1 Newhall, Los Angeles Co.	13- 3-16	1,384	oil sand
Pico Dome, No. 1 Hasley Canyon, Los Angeles Co.	14- 3-16	660	suspended
Calif. Eastern, No. 1 Wickham, Los Angeles Co.	32- 5-17	3,517	suspended
Coastline Oil Co., No. 1 Devil Canyon, Los Angeles Co.	21- 5-17	620	cemented
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,830	gr. sd. drilling
Oil Well Eng. Co., No. 1 Newport, Orange Co.	21- 6-10	2,805	suspended
Hall Pet. Co., No. 1-A Murrietta, Riverside Co.	23- 7- 3	Rig	rigging up
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	3,311	hd. sd. drilling
Imperial Valley Oil Co., Well No. 1, Imperial Co.	32-11-10	2,980	cleaning out
Davenport O. & G. Co., No. 1 San Marcos, San Diego Co.	30-12- 3	847	suspended
Turner, S. S., No. 1 Escondido, San Diego Co.	25-12- 2	2,044	sd. sh. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	X-13- 4	Mtl.	suspended

THE LUFKIN LINE

Lufkin

Counter Balanced Cranks *for Standard Rigs*



Lufkin-Trout Counter Balanced Crank on Standard Rig in California

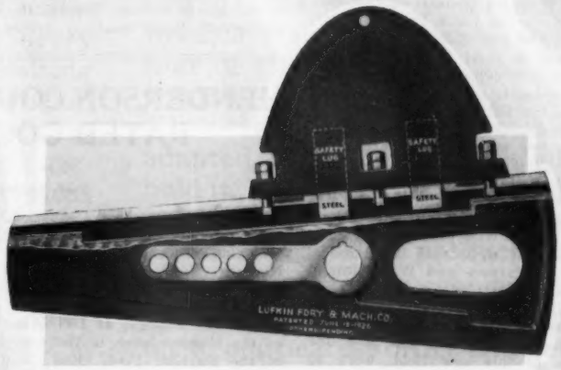
THE Lufkin-Trout Counter balanced Crank for oil well pumping has been accepted by producers and recognized by oil field equipment manufacturers as the correct method of balancing wells. To such an extent has this method grown in favor that producers are demanding Lufkin-Trout Counter balanced cranks for their Standard Rigs on oil wells where life of well does not justify full Lufkin equipment.

Lufkin-Trout Counter balanced cranks relieve shaft of all strain and there is no tearing up of band wheel due to side strain. Weights are easily adjusted to proper position and balancing within four amps is possible.

As originators of the crank counter balance much experience has been gained by actual tests in the shop and field.

An explanation of the features of the Lufkin-Trout counter balance crank will convince anyone of its effectiveness and flexibility. A folder explaining these features will be gladly sent on request.

Below: Lufkin-Trout counter balanced crank. Note safety lugs—weights cannot slide off. This feature with fly wheel brake allows weights to be adjusted within five minutes.



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Manufactured at Lufkin, Texas, by

THE LUFKIN FOUNDRY AND MACHINE CO.

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THE LUFKIN LINE **Tulsa, Okla. Houston, Texas** THE LUFKIN LINE

Los Angeles, Cal. Seminole, Okla. El Dorado, Ark. Odessa, Texas New York, N.Y.

Sandusky County Now Getting Play

Fifth Gas Producer in New Wharton Field, Hancock County. Wildcatters Busy in Northern Delaware County

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Aug. 12.—In the old Lima Field of northwestern Ohio, prospects are for more development work in the next few months. J. H. Murphy & Sons of Cromer, have taken leases on the William Enfield 80 acres; Mrs. Charles Sibbrel, 142 acres; Clarence Fry 90 acres, and the Charles Ziegler 160 acres, along the Bellville-Jackson Township line, in Sandusky County, about 4 miles north of the Cromer Field in Seneca County and are moving drilling outfit for the first test. The Murphys opened the Murphy Pool, in Liberty Township, Seneca County, where some remarkably large producers were uncovered but recently became flooded with water. Then they moved into Pleasants Township, also in Seneca County, getting a discovery well good for 360 bbls. initial on the Miller 400-acre lease which was sold to the Ohio Oil Co. Then came the big well on the Ida M. Rosemberger farm, known on the oil map as the M. Sherrick farm, in the NW. Section 31, Pleasants Township, drilled by W. J. Potsey and others being close up to the discovery well on the Miller farm. In this well the top of the Trenton was found at 1,416 feet and drilled to a total depth of 1,517 feet, or 101 feet in the sand. The well flowed at the rate of 45 bbls. per hour the first 24 hours which would make its record 1,080 bbls., but there was also a large amount of oil run into a sump hole as there were but four tanks to care for the crude.

In the new Wharton gas field, in Delaware Township, Hancock County, and a portion of the western part of Richland Township, Wyandot County, in the eastern edge of the old Lima Field, Talbott, Harmon and Watts have drilled in a nice gas well in their No. 1 on the H. H. Howard 320 acres, a mile south of Mount Blanchard, gauging 350,000 feet. This makes the fifth producer drilled by these parties upon their 3,000-acre block in the past few months. They are starting No. 1 on the Oren Ward 56 acres, Section 17, Delaware Township, Hancock County. This Wharton structure is now proven for some 4 or 5 miles long and several miles wide giving room for a large number of wells and it is understood Talbot, Harmon and Watts intend to begin and carry on an active campaign in fully developing their large acreage. It is understood the Ohio Fuel Gas Co. is now paving the way for pipe line connections to this new field, work to begin at once, the gas going into its Northwest Ohio system supplying Toledo, Ohio, and other northwestern Ohio cities.

Wood County

In the eastern part of Wood County in the old Lima Field and south of Toledo, Lantz and others' test in the southeast corner of the F. L. Stone, known on the old oil map as the John O'Leary farm, in the NW. Section 32, Lake Township, produced an initial of 8 bbls. from 1,269-80 feet, or 11 feet in the Trenton lime. In the eastern part of the same county, in Freedom Township, the Home Banking Co.'s initial well, 690 feet from the south line and 300 feet from the east line of the H. G. Foos farm, in the SE. Section 13, and known as the old L. Kahler farm on the map, produced an initial of 10 bbls. under pump. Sand was topped at 1,227 feet and drilled 50 feet in to a total depth of 1,277 feet.

In Jackson Township, Sandusky County, N. H. Allaman, trustee, drilled a second test 1,300 feet from the south line and 200 feet from the west line of the Geraldine Shaw farm, better known as the J. Vandersoll farm, in the NE. Section 32, which produced an initial of 25 bbls., a very good well for the old field. Top of sand in this well was found at 1,271 feet and drilled 80 feet into the sand.

CENTRAL OHIO

Wildcatters are working on another undeveloped area that may bring forth something worthwhile. McIntyre and others of Sistersville, W. Va., have taken 5,000 acres under lease near the town of Ashley, in the northern part of Delaware County, between Delaware and Mount Gilead, southeast of Marion and almost directly north of Columbus, and are now drilling the first test just to the northeast of Ashley, with hopes of finding production in the Clinton formation which should run in depth from 1,000 to 1,050 feet, much shallower than in Ashland, Licking and other counties to the east. Frank Nelson, of Lima, Ohio, the contractor, will drill three tests upon the block. This first test is located near Route 42 running from Cleveland to Cincinnati.

Twenty-seven completions are the week's record in the Central Ohio fields, and new work is maintained, numerous new locations having been made and many new wells are already drilling.

Ashland County

In Ashland County, Vermillion Township, James Burtner, Trustee, drilled in an average gas well on the W. D. Atterholt farm, at 2,865-71 feet. In Orange Township, the Ohio Fuel Gas Co. has a very good gas well in No. 1-4,730 on the Jason Campbell farm, Section 21. The Kemrow Co. is drilling a second test on the Ben Evil, Section 29, same township. Ohio Fuel Gas Co. is drilling No. 1-4,762 on the W. S. Oswalt, Section 18, Greene Township. Same company drilled a dry hole in No. 1-3,621 on the S. V. Plice, Section 29, Jackson Township. No sand was found. In Lake Township, Robinson and others drilled a light gas well, No. 5 on the Emma A. Devinney, Section 9, which also produced 16 bbls. initial the first 24 hours from the Berea sand at from 604 to 671 feet. In Mohican Township, Meltzer and others' test on the Michael Ott, Sr., farm, in Section 24, produced an initial of 16 bbls. from the Berea sand at from 715 to 742 feet. B. Slagel's No. 3 on the A. and H. Metcalf, Section 21, topped the Clinton at 718 feet and had a show at 724 feet and is going a little deeper. In Montgomery Township, the Kemrow Co. has a good gas well on the R. W. Topping, Section 1, in the Clinton lime at 2,679-89 feet, and is drilling No. 1 Joe E. Gast, Section 5. It also made a location for No. 1 on the S. and J. Emmons, same section. Same company is drilling on the H. P. Fisher, Lots 66 and 67, Sullivan Township. Ohio Fuel Gas Co. is drilling No. 1-3,615 on the Arthur Ohl, Section 26, Milton Township. In Perry Township, Robinson and others' No. 12 on the W. E. Strine, Section 20, pumped 4 bbls. from the Berea at from 639 to 656 feet.

In Medina County, Lafayette Township, the Ohio Fuel Gas Co. has a light gas well in No. 1-4,721 on the Emma Torma, Section 1, and is drilling No. 1-4,769 on the F. E. McCracken, Lot 20, Westerfield Township.

In Lorain County, Daugherty and others' test on the Henry Smith, Lot 7, Carlisle Township, was dry in the Clinton at 2,376-78 feet. Wiser Oil Co. is drilling a second test on the J. C. Palmer Lot 14.

In Wayne County, Chester Township, the Ohio Fuel Gas Co.'s No. 2-3,627 on the Paul D. Grady, Section 8, failed to show any sand and has been given up as a duster.

In Holmes County, Hardy Township, the East Ohio Gas Co. made a location for No. 4 on the H. and H. Bell, Lot 29. Ohio Fuel Gas Co. is drilling No. 1-3,558 on the Mary Schrock, Section 5, Paint Township, and drilled in a fair gas well in No. 1-3,508 on the C. C. Felton, Lot 11, Monroe Township. The East Ohio Gas Co. has started No. 2 on the J. G. Stitzline, Section 16, Knox Township, and made a location for No. 3 on the A. E. Harford, Section 14, Richland Township.

Richland County

In Richland County the Ohio Fuel Gas Co. has started spudding No. 2-4,725 on the Hervey C. Snyder, Sections 4 and 5, Worthington Township.

In Knox County, Monroe Township, the Upham Gas Co. has a duster on the William Hoovler, Section 1. Ohio Fuel Gas Co. made a location on the George W. Beckley, Lots 1 and 21, Jackson Township. Same company is drilling No. 1-3,588 on the Goldie Robeson, Section 16, Jefferson Township, and in Brown Township, same company is spudding No. 5-4,756 on the Elmer D. Pryor, Section 3, and made a location for No. 4 on the Sally Richert, Section 1.

In Coshocton County, the Ohio Fuel Gas Co. is drilling No. 2-4,787 Cornelia B. A. Cory farm, in the third quarter of Franklin Township.

In Summitt County, Greene Township, the Comet Oil and Gas Co. is drilling on the Ellen Dailey, Section 31, and G. W. Crouse made a location for No. 3 on the Crouse farm, Section 18.

In Licking County, Perry Township, the Whitehill Oil Co.'s No. 4 on the J. C. Burkholder, Section 3, is a light gas well, in the Berea sand at from 586 to 597 feet. No. 6 same farm, is a fair gas well at from 584 to 589 feet. Same company has made a location for No. 11 on the Albert Ashcraft, Section 2. McClay Brothers are drilling No. 1 on the J. C. Burkholder, Section 3, and made a location for No. 3 on the Emmet Hoover, Section 2. Settles Oil Co. got an oil showing in the Berea at 598 feet, but is going deeper. Armstrong & Lyttle's No. 13 on the J. W. Motherspaw, Section 12, Franklin Township, is reported good for 4 bbls. from 738 to 745 feet. Preston Oil Co. made a location for a second test on the Wayland Ashcraft, Section 11, Fallsburg Township, and the Murphy Petroleum Co. made a location for No. 3 J. W. Little, Section 8. Emerald Petroleum Co. is drilling No. 6 John W. Little, Section 8, same township. In Bowling Green Township, the Ohio Fuel Gas Co. has concluded to drill deeper its No. 2-2,831 on the Barton Cooperider, Section 8. Wehrle Gas Co. is drilling on the H. Wiley, Section 13, Hanover Township.

In Muskingum County, Washington Township, Palmer and Geisinger are drilling on the John M. Riley, Section 3. Fritz Oil Co. is drilling on the Charles Gillespie, Section 8, Bush Creek Township.

In Athens County, Berne Township, the Ohio Fuel Gas Co. has an average gas producer in No. 3-3,522 on the C. D. Henry farm, Section 34, in the lower Cow Run sand at 1,605-28 feet, total depth 1,638 feet.

Meigs County

In Meigs County, Sutton Township, the Southern Petroleum Co.'s No. 1 on the Peter D. Karr, Section 11, is reported good for 10 bbls. from the upper Berea at from 1,973-83 feet, total depth 1,993 feet. Tyree and others' No. 12 William Carnahan, same section, recorded at 15 bbls. initial from 605 to 620 feet, which is the upper Cow Run. Same parties'

(Continued on Page 109)

HENDERSON COUNTY, KENTUCKY, WELL RATED GOOD FOR 100 BBLS. INITIAL

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky., Aug. 12.—The outstanding wells of the Kentucky Field are a test on the Jeter lease, in the Niagara Field of Henderson County, rated good for 100 bbls. initial; No. 7 on the First National Bank Co.'s land, in Daviess County, at 160 bbls.; No. 3 on the Morgan lease, in the western part of the Bartlett Pool, Ohio County, for 300 bbls., and No. 16 on the Nancy Farmer lease, in the Friendship Church Pool, same county.

Widening the Tri-County Field into the far western section of Daviess County, on the McLean County line, the Illinois Pipe Line Co. started last Monday running a gathering line to the Miller & Damron or Creek Drilling Co.'s production west of St. Joseph, where they now have three producing wells and have started operations on a number of others. It will require but a short time to push the 6 miles of pipe from the company's line to the Calhoun road over to the Beech Grove Section. The three wells of the Creek Drilling Co. are being put on the pump in the St. Joseph area and expect to have at least several hundred barrels ready to run as soon as the pipe line reaches the area.

Week's Work

Summary of the week's work in the Kentucky fields shows 43 completions, 27 producers with an initial production of 1,059 bbls., 14 dry holes and 2 gas wells.

County—	Oil Comp.	wells	Prod.	Dry	Gas
Ohio	25	19	725	5	1
Daviess	13	4	202	8	1
Warren	3	2	7	1	0
Henderson	2	2	125	0	0
Total	43	27	1,059	14	2

Ohio County Wells

The best of the late completions in the Ohio County fields is the Rex-Pyramid Oil Co.'s No. 3 on the G. W. Morgan about a mile west of the big wells on the Bartlett and Trodgen farm, in the Bartlett Pool, of Ohio County, and directly west of Taffy. This well is reported with an initial of 300 bbls., making the third large well to be found on the lease, which contains 73 acres, with room for several more wells. No. 4, same farm, is due for completions and No. 5 starting.

In the Friendship Church area, the Sirman Co.'s No. 16 on the Nancy Farmer is rated good for 100 bbls. initial. This is one of the good producing leases in that part of the county. The National Deposit Bank Co.'s second test on the T. P. Royal 25 acres is said to be good for 20 bbls. in the Jett sand.

Sidney Petroleum Co.'s No. 1 on the Wilber Carden is said to be showing gas in the Jett sand. This test is 4 miles

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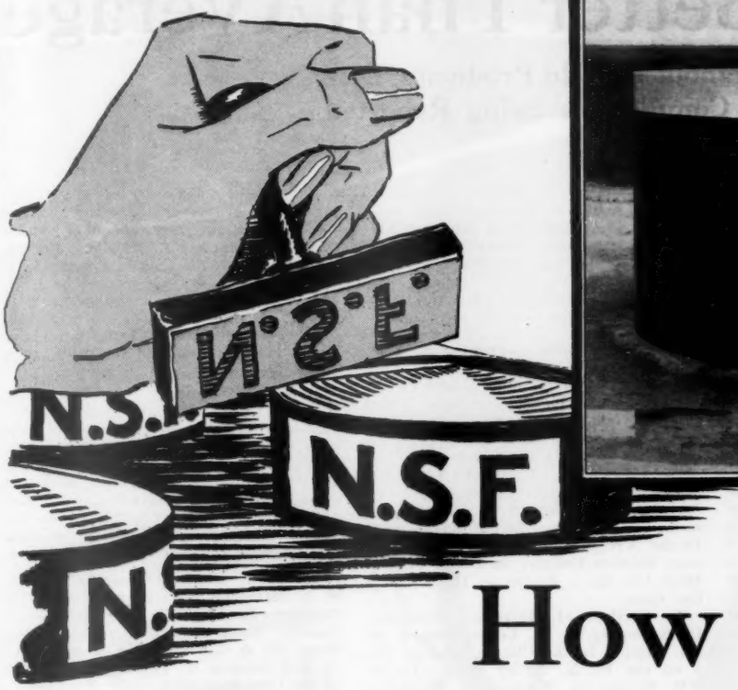

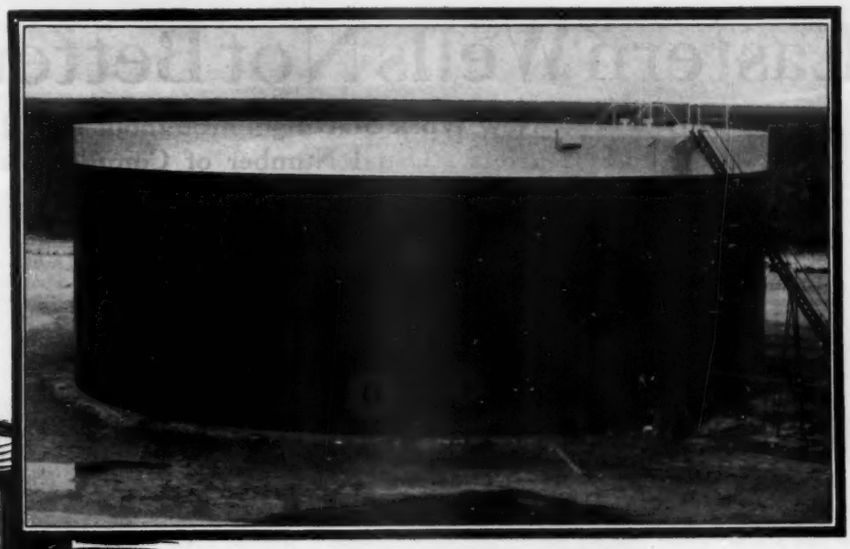

Wiggins Breather Roof on an 80,000-barrel tank at Ingleside, Texas.

How to AVOID having *your* tanks "N.S.F."

Ask for our booklet, "Stopping Evaporation"

IF you deposit your chief asset —oil—in ordinary storage tanks, you cannot draw out as much as you deposited. Evaporation stamps the tanks "N.S.F."

This loss is of two kinds—volumetric and gravity. For every 1% loss in volume the resulting lowering in gravity of all the oil in the tank is enough to bring up the total loss to approximately 2-1/3%. A 1% volumetric loss is about the average for light crude stored for a year under good steel cone roofs. The figure is, of course, much higher for old air-leaky roofs. A 2-1/3% loss in value means that the last $23 worth of oil out of every $1000 stock would be an "N.S.F." loss to you.

But you can avoid this heavy drain on your resources by storing oil in tanks equipped with Wiggins Roofs. For standing storage the Wiggins Breather Roof offers an economical solution of the problem and for working tanks the Wiggins Floating Roof is especially adapted. When nothing else will hold it, a Hortonsphere pressure storage tank stops evaporation loss on the wildest products.

Let us discuss your evaporation problems. Outline these in a letter to our nearest office and perhaps we can suggest a solution which will appeal to you.

STOP EVAPORATION LOSSES

with WIGGINS BREATHER ROOFS

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Chicago	2128 Old Colony Bldg.	Havana, Cuba	Apartado 2507

O&GJ 8-15 Gray

Eastern Wells Not Better Than Average

New Work Starting Throughout the Old Producing Districts. Usual Number of Completions Being Reported

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Aug. 12.—Since operations in the eastern fields were last reviewed the usual numbers of wells were completed but few were better than the average size. Scattered through all the old producing districts there is new work starting.

In Section 13, Rush Creek Township, Fairfield County, Ohio, the Hope Construction & Refining Co. has reached a depth of 5,050 feet at its deep test on the S. W. Black farm and is still drilling. Up to this time it is now deeper than any other well ever drilled in that locality. Neither oil or gas has been developed in commercial quantities. In that section several wells have been drilled into the Trenton rock and came in light pumpers, so light it was not considered profitable to drill for others.

SOUTHEAST OHIO

In the deep sand territory in southeast Ohio, the Emerald Petroleum Co. completed and shot in the Clinton sand a second test on the Sarah J. Little farm. It produced 56 bbls. the first 24 hours.

In the SE Section 2, Washington Township, Hocking County, the Preston Oil Co. completed a second test on the John Liff farm. It produced 45 bbls. the first 24 hours after shot in the Clinton sand. In Jackson Township, Section 10, Perry County, J. Elder and others started to drill on the D. A. Clark farm. In Section 12, Reading Township, the Preston Oil Co. is drilling a second test on the S. C. Love farm and made the location for a second test on the S. H. Soffell farm.

In Section 12, Franklin Township, Licking County, the Peoples Banking & Trust Co. of Marietta completed in the Berea grit No. 13 on the J. W. L. Motherspaw farm, good for 14 bbls. a day. In the NE Section 1, Hopewell Township, Licking County, the Pure Oil Co. completed and shot in the Clinton sand No. 4 on the H. E. Loughman farm. It produced 30 bbls. the first 24 hours.

In the SE Section 12, Ward Township, Hocking County, the Preston Oil Co. completed in the Berea grit No. 1,336 on the Sunday Creek Coal Co.'s property. It is a gasser good for 650,000 feet. On Whipple Run, Section 151, Fearing Township, Washington County, J. F. McIntyre completed in the first Cow Run sand a very light pumper on the E. C. Kidd farm.

In the NE Section 34, Cambridge Township, Guernsey County, the scene of many good wells, the Preston Oil Co. completed its test on the William Cropper farm to the Niagara lime at a depth of 3,450 feet and it produced 25 bbls. the first 24 hours after shot. In the SW Section 22, Elk Township, Noble County, B. C. Robinson and others completed No. 4 on the Anna Carnel Walker farm to the Germantown sand at 907 feet and after shot it showed for a 3-bbl. pumper. In Section 16, Ludlow Township, Washington County, Homer Newhart and others completed No. 2 on the George Armstrong heirs farm to the Berea grit at 2,040 feet. After shot it showed for about 300,000 feet of gas and about 2 bbls. of oil a day.

Medina County

The East Ohio Producing & Refining Co. completed No. 5 on the Steve and Anna Jelencics farm, Lot No. 2, Section 12, Chatham Township, Medina County, to the sand at 325 feet and it produced 4 bbls. the first 24 hours after shot. In the same township, Lot 3, Section 10, the O. K. Oil & Gas Co. completed No. 27 on the Sandford and Watson farm at 340 feet and it produced 15 bbls. the first 24 hours after shot. In Lot 26, northeast quarter section. Harrisville Township, Medina County, Ray C. Jones completed his test on the A. D. Falconer farm at 400 feet and it is a duster.

In Section 35, Bethel Township, Monroe County, southeast Ohio, the Southern Oil Co. completed a test on the Joseph Paris farm to the Squaw sand and it produced 50 bbls. the first 24 hours. This originally was an old Keener sand well drilled in several years ago, and then drilled down to the Squaw at 1,402 feet.

In the NE Section 8, Harrison Township, Perry County, the Northern Development Co. completed No. 1 on the Wilson heirs farm to the Clinton at 3,575 feet and after shot it produced 30 bbls. the first 24 hours. In the same township and county, but in the NW Section 17, R. C. Miller and others drilled a test on the M. Gossman farm to the Clinton at 3,525 feet and it is showing for a 1-bbl. pumper.

Licking County

In Licking County, Section 11 of Franklin Township, Charles H. Vaughn and others completed No. 6 to the Berea at 765 feet, and it produced 8 bbls. the first 24 hours after shot. This is on the D. E. Dustheimer farm, and it is expected it will make a 2-bbl. pumper. In Section 23, Green Township, Hocking County, the Chartiers Oil Co. completed a test on the John T. Nutters farm to the Clinton at 3,076 feet and it is dry.

The Hill Top Oil Co. completed No. 2 on the F. A. Hoiles farm to the Berea grit at 700 feet, good for a 2-bbl. pumper. This is in Alliance Township, Stark County. In the same township, but on the Frank Hartsell farm, Ray Miller completed No. 1 to the Berea grit at 710 feet and it is also showing for a 2-bbl. pumper.

In Section 6, Jackson Township, Muskingum County, the Hope Construction & Refining Co. completed No. 8 on the W. E. Helphrey farm and it produced 35 bbls. after shot in the Clinton sand.

In Lot 17, Monroe Township, Holmes County, the Ohio Fuel Gas Co.'s test on the C. C. Fulton farm is a gasser in the Clinton sand good for 500,000 feet. In Louden Township, Carroll County, Eaton & Co. have a very light pumper in the Berea grit in No. 5 on the William Harding farm. In Washington Township, same county, the Natural Gas Co. of West Virginia had the same luck at a second test on the R. R. Herrington farm.

In Section 9, Perry Township, Licking County, M. F. Whitehill completed in the Berea grit No. 11 on the Alice Ashcraft farm, an 8-bbl. pumper. In Section 35, Independence Township, Washington County, C. W. Schramm and others completed No. 4 on the Harry Pelter farm, dry in the Big Injun sand.

Meigs County

Operators in Meigs County are still active, but the average size of the wells is so small as to discourage development work if the market goes lower.

In the NE Section 11, Sutton Township, S. A. Palmer and others completed in the same formation a duster on the August A. Circle farm. In the NW Section 11, Sutton Township, Smith & Watterson started to drill on the A. E. Carubahan farm. In Lot 283, same township, the Hovis Oil & Gas Co. started to drill on the Owen & Laura Watson farm.

In Section 5, Salt Creek Township, Holmes County, the Ohio Fuel Gas Co.'s test on the H. D. Kilgore farm is a duster. In Paint Township, the same company is drilling on the Mary Shrock farm. In the same township, the same company is drilling near the top of the Clinton sand on the Saville Herman farm. In Section 6, Clark Township, Coshocton County, the Logan Gas Co. has a gasser at a second test on the Victor Scheibe farm. In the same township, the Pure Oil Co.'s test on the A. C. Eppley farm is good for 8 or 10 bbls. a day in the Clinton sand. In Section 6, same township, the Ohio Oil Co. has a rig up on the Robert Rhode farm and rigging up on the L. D. Fair & Co. farm.

In Section 2, Fairfield Township, Washington County, the Ohio Fuel Gas Co. completed a test on the P. A. Lynch farm. It is a gasser in the Maxon sand. In the NW Section 28, Richland Township, Belmont County, the Dollar Savings Bank Co. has a duster on the Rehm & Co. farm.

In Section 17, Harrison Township, Perry County, J. W. Leonard has a 20-bbl. pumper in the Clinton sand at No. 3 on the W. N. Butley farm. In the NW Section 23, Washington Township, Hocking County, is a 5-bbl. pumper in the same formation. At Bolin Mills, Knox Township, Vinton County, Koontz & Co. completed a second test on the John Martin farm. It is dry in the Berea grit.

Southeast Ohio Tests

In a few sections of southeast Ohio there is some test work under way and starting. In Franklin Township, Monroe County, the Preston Oil Co. is drilling on the Ernest Mullet farm. In the same township, Thornburg & Lucas are drilling a second test on the C. H. Hines farm. In Harrison Township, Perry County, the Ohio Fuel Gas Co. is drilling tests on the P. O. Offenbacher and Alex Brown farms. The same company has a rig up on the Hayzeler farm. R. C. Miller & Co. are due in the sand on the E. E. Heckett farm. In Section 20, the Ohio Fuel Gas Co. has a rig up on the W. E. Brown farm. In Harrison Township, McClay Brothers are drilling on the Karl Brown farm. In York Township, Morgan County, the Leonard Oil & Gas Co. is due in the sand on the A. L. Giles farm.

In Washington Township, Hocking County, the Gordon Oil Co. is drilling on the C. E. Gardner farm. The same company is drilling on the Curt Brown farm. The Preston Oil Co. has the rig completed for a second test on the M. B. Fles farm. In Greene Township, the Chartiers Oil Co. is drilling on the John T. Nutter heirs farm. In Section 36, Ward Township, the Northern Development Co. is drilling on the J. G. Payne farm. In Greene Townsnip, the Arkansas Fuel Oil Co. is drilling on the Snider heirs farm. In Wheeling Township, Guernsey County, Hartwick & Watson are drilling tests on the Charles A. Gray and L. C. Stoker farms. The East Ohio Producing & Refining Co. has a rig up on the E. C. Quillin farm.

WEST VIRGINIA

In Union district, Ritchie County, the Pittsburgh & West Virginia Gas Co. completed in the Big Injun sand a duster on the W. H. Hall farm. In the same district, the same company completed a gasser in the same formation on the C. G. Hays farm.

In Spencer district, Roane County, the Federal Oil & Gas Co. completed the rig for another test on the L. C. Vandale farm. In Union district, Clay County, the Big Laurel Oil & Gas Co. started to drill on the Otto Bowman farm.

Drilling Deeper

In New Milton district, Doddridge County, the Hope Construction & Refining Co. started to drill deeper No. 3 on the K. W. Stout farm, abandoned about three years ago. In DeKalb district, Gilmer County, the Hope Construction & Refining Co. has a rig up on the I. N. Hardman farm. In Clay district, Wirt County, E. Hayhurst and others started to drill on the W. A. Lewis farm and Porter Abbott farm and started to drill on the W. J. Roberts farm.

In Williams district, Wood County, O. E. Grow has a very light pumper at No. 16 on the William McAtee farm. In the same district, Haskell, Rose and Stephens have a rig up on the Mrs. Guthrie farm. In Union district, the Valley Mills Oil & Gas Co. has a rig up for a second test on the William Snyder farm. In Walker district, the Oil City Trust Co. is drilling No. 4 on the J. R. McCracken farm.

In Union district, Pleasants County, S. Y. Ramage's Nos. 28 and 29 on the Reyman Brewing Co.'s property are dusters. In McKim district, the Delong Farm Oil & Gas Co.'s No. 9 on the C. C. and Rebecca J. Delong farm is dry in the Cow Run sand.

In Henry district, Clay County, the South Penn Oil Co. completed No. 3 on the Alfred Fields farm, estimated good for 15 bbls. a day in the Big Injun sand. The location is 600 feet northeast of the first test on this farm. On Triplett Run, Spencer district, Roane County, the Morford Oil & Gas Co. completed in the Big Injun sand a test on the J. H. Pursley farm, located 1,600 feet northeast of the Hope Construction & Refining Co.'s second test on the Craig-Bartlett farm. It is a duster.

Pleasants County

In Jefferson district, Pleasants County, Dinsmoor & Co. completed a second test on the James Severs farm. It is a very light pumper in the Cow Run sand. In the same district, Oliver & Glenn completed in the Horse Neck sand a test on the M. E. Yergin farm. It is dry in this formation.

The Hope Natural Gas Co. completed a test on the Hogan Barr farm, on the headwaters of Deadmen Run, Center district, Calhoun County, to the Maxon sand, showing for a 10-bbl. producer. In McClelland district, Doddridge County, G. L. Cabot completed his No. 2 on the Edward Tate farm at 3,287 feet and have a well making about 500,000 feet of gas and about 10 bbls. of oil a day.

In McComas district, Cabell County, the United Fuel Gas Co. completed No. 3,943 on the H. C. Swann farm at 3,509 feet and have a fair gasser. In the same district and county, the Empire State Gas Co. completed No. 2 on the T. I. and A. B. Swann farm at 3,474 feet and also have a fair gasser.

In Union district, Pleasants County, S. Y. Ramage completed No. 29 on the Reyman Brewing Co. property at 944 feet and it is a duster. In Duval district, Lincoln County, the United Fuel Gas Co. completed No. 3,976 on the Horse Creek L. & M. Co. at 2,225 feet and it is a fair gasser.

In Geary district, Roane County, the Virginian Gasoline & Oil Co. completed No. 4 to the Injun sand estimated good for 20 bbls. The Public Gas Corp. drilled No. 5 Logan Canel Coal Co. 372 feet deeper, making a total depth of 1,027 feet and it is dry. This is in Harvey district, Mingo County, at the mouth of Breeden Creek.

Drilling and Starting Tests

In Ravenwood district, Jackson County, the Virginian Gasoline & Oil Co. is

(Continued on Page 121)

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THE Moore Champion DERRICK

Important Wildcat in Fisher County

Has Good Oil Showing 4 Miles From Other Production and Renews Interest in Jones and Stonewall Counties

By L. E. Bredberg
Staff Correspondent, West Texas Fields

FORT WORTH, Tex., Aug. 12.—The latest news from West Texas brings the report of a good showing in a wildcat located in northeastern Fisher County, 4 miles northeast of the nearest production of the Sun Oil Co. and Cranfill & Reynolds, which is in the S half, Section 207, Block 1, B.B.B.&C.R.R. Survey.

This likely looking discovery is jointly owned by the Amerada Petroleum Corp. and Roeser & Pendleton, it being understood that the latter firm is operating the well. The accompanying plat shows the surrounding acreage as owned by the different companies, Amerada Petroleum Corp., Roeser & Pendleton and the Barnsdall Oil Corp., being closest to the well, with the Humble Oil & Refining Co., Snowden & McSweeney and the Pure Oil Co. holding smaller pieces in the vicinity. The discovery is located 590 feet from the north line and 1,320 feet from the west line of the SW, Section 191, Block 1, B.B.B.&C. R.R. Survey, on an individual subsurface structure, consequently cannot be tied in with the production in Sections 207 and 208 to the south, although correlates similarly to the formations in those wells, and the gravity of the oil is the same.

The 6-inch casing was set at 2,933 feet and the operators are trying to underream this on down, but the hole is caving rather badly, causing a little difficulty. Pay was topped at 3,123 feet, and the hole started filling with oil at the rate of 100 feet an hour, and is now standing with 850 feet of oil in the hole. Elevation on the surface is 1,803 feet.

Although this probably will not link up with the production on the south, there is still plenty of room to the south for possible producers, and the new pool, if one is proven by this well, can run to the north, northeast or east, with a possibility to the west, as the dry hole drilled by Snowden & McSweeney, 1 mile west, was a shallow test, only going to 1,305 feet, and deeper drilling in that direction may prove acreage good on the west side of the discovery.

As all extensions or new discoveries of this nature tend to awaken more, or new, interest in a locality, northwestern Jones County and northeastern Fisher County will no doubt see renewed activity, with the probability that south central Stonewall County will also gain attention.

Pecos County's Interesting Wells

Pecos County's interesting wells have attention still riveted on them, the Taylor-Link area's tests no doubt being the most closely watched at present. The Texas Company, Phillips Petroleum Co., and Independent Oil & Gas Co.'s No. 1 J. P. Campbell, in the SE, Section 46, Block 10, H.&G.N. Survey, 3½ miles east of the Pecos Valley Pool, has been acting as if it would really amount to a commercial producer, consequently has gained considerable publicity for itself. On a 24-hour test it swabbed dry after producing 65 bbls. of oil in that test. After the test it showed up as if it would make a comeback when the oil rose 250 feet in 12 hours, and there is a good possibility of it making a small well from the two pays, 1,710-13 feet and 1,725-30 feet. Total depth is 1,734 feet in hard sand.

Other tests to be made between No. 1 Campbell and the producing wells in Section 22 may have a better chance for production, although in the western quarter of Section 27, Perren and others' No. 1 Eaton is only a gasser, and has never produced any oil, and it lies a little to the north and between the producing wells and this late test. Drilling, alone, will have to prove whether the intervening acreage will produce, and the companies holding this acreage may not be in a hurry to drill any more than is necessary, at the present.

W. A. Moncrief's No. 1 University, which has formerly been carried as No. 2, in Section 13, Block 18, set the 6-inch casing at 1,429 feet and cemented it from the bottom to 300 feet above the 8-inch casing, and it has been reported that the other wells to be drilled in this new area will be cased and cemented in like manner, or from a point in the formation carrying the first showings of oil and gas, around 925 feet and on down. This well is running about 40 feet higher on the structure and many are of the opinion that it will make a much better well than the discovery well of the Taylor-Link Oil Co. in the SW, Section 30, Block 16, to the east. The end of the week will no doubt pronounce just what this well will amount to, for drilling is being resumed now, and without any trouble, it should be drilled in this week.

R. D. Webb's No. 1 fee, located 1,900 feet from the west and 423 feet from the south lines of Section 105, Block OW, T.&M. Railway Survey, Pecos County, is still shut down at 472 feet where the gas increased to 6,100,000 feet after encountering a sand at 465 feet and striking 200,000 feet. This well showed as an interesting feature 10 days ago, and has been standing at the above depth since that time. It is located approximately 6½ miles west of Fort Stockton, and there is a possibility, and a rumor to the effect, that the gas from this well might be piped to Stockton for commercial purposes.

Glasscock County's Tests

The Kirby Petroleum Corp. is still fishing casing in its No. 1 J. J. Phillips, which is located 2,310 feet from the west and 330 feet from the north lines of Section 23, Block 33, T-2-3, T.&P. Survey, Glasscock County. This is the test which lies between the World Oil Co.'s No. 1 McDowell in Section 21, Block 34, T-2-S, on the southwest and the production in Howard County, to the northeast, and which encountered the Henshaw pay stratum at 2,212 feet, last week. It was shut down at a total depth of 2,268 feet, and shot with 206 quarts from 2,160-2,200 feet, where it encountered the first showing of oil, and this shot blew part of the pipe up the hole and is causing quite a loss of time in a fishing job. It is now standing with 1,200 feet of fluid in the hole. Before it was shot, the well produced 188 bbls. of oil in six hours on the swab, but at present nothing definitely can be said in regard to what size well it will make when cleaned out and put on production.

The Midwest Exploration Co.'s No. 1 Edwards, a northeast offset of the World Oil Co.'s discovery well, located in Section 20, had a rainbow show of oil at 2,350-58 feet, but at 2,460 feet it encountered a hole full of sulphur water. It is now drilling ahead near 2,500 feet. This looks rather discouraging, for the World Oil Co.'s No. 1 McDowell encountered the first pay stratum at 2,351-56 feet, and the big pay at 2,385-98 feet, and the Midwest well was running higher on the structure. Elevation of the World well is 2,543 feet and the Midwest well is 10 feet higher on the surface, or 2,553 feet in elevation.

Another disappointment for that area is the Houston Oil Co.'s No. 1 McDowell, located 2,310 feet from the east and 330 feet from the north lines of Section 30, Block 33, 1 mile east of the discovery well of the World Oil Co. This test is now shut down at 2,603 feet with intention of plugging. Elevation is 2,536 feet. The west is about the only direction in which the pool may extend itself.

The California Co.'s No. 1 Turner, in the NE, Section 46, Block 33, was junked and abandoned this week at a total depth of 1,534 feet. This test is located 4 miles southeast of the World's No. 1 McDowell.

Important Pools Decline

The Howard-Glasscock County Pools showed a considerable decline in July, this decrease amounting to 27,030 bbls., or a drop from 1,015,901 bbls. in June and 988,871 bbls. in July. This is for the pay horizons producing below 1,800 feet. The potential for the period of August 1 to September 1 also shows a drop for wells producing from the 3,000-foot pay. From July 1 to August this potential was 33,925 bbls. and the present period places it at 31,917 bbls. Potential of the 2,500-foot pay shows a drop of around 400 bbls., while the potential for the 2,200-foot pay fell off 1,880 bbls. The pools showed a drop in daily average this week of 735 bbls. over the past week. Many of the wells are not producing their allowable quota, due to the fact that they have fallen off in production since their being put on production. Allowance of the fields is now 39,017 bbls. daily.

While Howard and Glasscock Counties suffered a drop in production, Winkler County showed a gain of around 145,000 bbls. over June. The Southern Crude Oil Purchasing Co. completed a number of wells during the month and is responsible for 74,013 bbls. of this gain, while the Atlantic Oil Producing Co. was responsible for 40,072 bbls. more of it. The Gulf Production Co. showed a drop of about 12,000 bbls.

Pipe line runs through trunk lines out of West Texas decreased around 7,000 bbls. the past week, while tank car shipments increased a little over 3,500 bbls. Refinery runs fell off 13,052 bbls., probably due to the fact that some of the refineries do not have the crude in storage to run, and cannot get hold of enough to run the plants to their capacity.

A 3½-mile extension to the 1,400-foot pay horizon in the Roberts-Settles Pool, Howard County, was marked by Cranfill & Reynolds' No. 2 Abrams in Section 3, Block 32, Township 2s, T.&P. Survey. Top of the pay of this extension well is 1,427 feet and it was bottomed at 1,434 feet, estimated as a 150-bbl. well. The nearest production is this company's No. 1 Abrams, which is 600 feet south of the No. 2, but is producing from the 2,200-foot pay horizon.

Reagan County's phenomenal producer, the Continental Oil Co.'s No. 1-B University, the world's deepest oil well, reached a still higher mark this week at 2,752 bbls. of oil with 25,495,000 feet of gas, or an increase of 100 bbls. over the previous days. The new high was made Monday. Last Monday it produced 2,750 bbls.

Large Acreage Purchases

Large acreage purchases have been reported in Schleicher, Sutton, Irion and Edwards County, the Atlantic Oil Producing Co. reported as the largest buyer, having purchased around 100,000 acres, 70,000 of these being in the Sol Mayer ranch, which is in southwestern Schleicher County and run over into Sutton County. The Pure Oil Co., The Texas Company and Shell Petroleum Corp. are other major companies which have purchased considerable acreage in this area. The Phillips Petroleum Corp.'s No. 1 Whitten, located in the NW of Section 35, Block LL, T.C.R.R. Survey, which encountered a good showing of oil at 4,110 feet, has been the basis for all of the lease buying in this area, these counties having laid practically dormant until the showing was made in this test.

In the northern part of the Permian Basin, in Garza County, the Emerald Oil Co. has a good-looking well in its No. 1 J. C. Bargsley in Section 135, Block 5, H.&G.N. Survey. A slight show of oil was found at 2,455 feet and at 2,535 feet the well had 200 feet of oil in the hole. It was drilled to 2,551 feet with no increase in the amount of oil, so was plugged back to 2,535 feet and shot. It is now cleaning out. There are five

(Continued on Page 150)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended August 12

Company, farm and location—	Remarks—
BORDEN COUNTY	
Louisiana Oil & Ref. Co.'s No. 1 York, 330 ft. from N, and 1,320 ft. from W Sec. 322, Blk. 97, H.&T.C.R.R. Sur.	Location.
Moncrief et al's No. 1 Munger, C of SW Sec. 14, Blk. 31.	Rig.
Teas & Wheeler's No. 1 Long, 1,320 ft. N and E of Sec. 27, Blk. 30, T.&P. Sur.	Drlg. 1,580 ft.; top salt 1,630 ft.
BREWSTER COUNTY	
E. W. Bateman et al's No. 2 Nevill, 2,000 ft. S and W line of Sec. 62, Blk. 13, G.H.&S.A.R.R. Sur.	Drlg. 890 ft.
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor. Sec. 45, Blk. G-15, G.C.&S.F.	Fishing 1,935 ft.
Cowden & Bowser's No. 1-A Jackson & Harmon, Sec. 1, Blk. 331, T.C.R.R. Sur.	Set 8-in. 1,530 ft.; shut down 2,000 ft.
Forrest Oil Co.'s No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 300 ft.
J. M. Hickey's No. 1 Jackson & Harmon, NE cor. Sec. 182, Blk. 9, G.H.&S.A. Sur.	Shut down 1,302 ft.
Johnson & Weekley's No. 1 Jackson & Harmon, C Sec. 104, Blk. 10, G.H.&S.A. Sur.	Drlg. 2,485 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,740 ft.
COKE COUNTY	
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.	Cleaning out 2,870 ft.
Mid-Kansas Oil Co.'s No. 1 W. E. Lackey, 330 ft. N and E of SW cor. Sec. 272, Blk. 1-A, H.&T.C.	Pay 3,755-56 ft.; 6⅝-in. casing set 3,451 ft.; drlg. 3,927 ft.
Ray E. McCamey et al's No. 1 McCutcheon, 2,300 ft. S and 785 ft. W of NE cor. of T. J. Hines Sur. No. 4.	Shut down 3,520 ft.
CONCHO COUNTY	
Duffy et al's No. 1 Gilliam, 1,520 ft. N and 1,120 ft. W of SE cor. Sec. 21, Blk. 10, H.&T.C.R.R.	Spudded and shut down.
Jones & Leiner's No. 1 Jones, 420 ft. S and 15 ft. E of NW cor. John G. Reh Sur. No. 1,878	Top lime 1,770 ft.; top pay 1,775-80 ft.; 18 ft. oil in hole; to test; drlg. 2,373 ft.

(Continued on Page 112)

Gray County Sends Panhandle to Peak

Big Wells Now the Feature, One Estimated 15,000. Deepening Operations Encouraged by Successful Results

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 12.—Gray County is to the Panhandle what Pecos County is to West Texas, full of possibilities and features in oil production, and the gain of 12,473 bbls. this week is one of the main markers of the district. All of the Panhandle counties gained in production, running the increase up to 14,892 bbls. over the past week, reaching a new peak in production totaling 113,643 bbls. The Wichita Falls area also claimed an increase of 2,483 bbls. over the previous week, but that district is not giving the pipe lines a problem like the Panhandle district has for the past two weeks. The pipe lines in the latter district are congested and unable to carry the present amount of production, and many of the large wells coming in have had to be pinched, but in some areas these large wells rapidly decline, therefore the lines which are serving this area will no doubt be able to handle the output with the help of storage.

Big wells are the feature of Gray County at present, and the main one of the week was the Phillips Petroleum Co.'s No. 4 Palmer, in the NE, Section 31, Block B-2, H.&G.N. Survey, which came in for an estimated amount of 15,000 bbls. the first 24 hours and 11,000 bbls. the second 24 hours. Top of the pay, granite wash was from 2,855 feet, where the well was shut down and had to be pinched because of lack of pipe line facilities.

The Texas Company's No. 9 Bowers, in Section 89, Block B-2, topped the granite wash pay from 2,975-77 feet and was shut down at the latter depth, the well flowing 7,956 bbls. on a 24-hour gauge, and the Gulf Production Co.'s No. 1 Faulkner, in Section 33, Block B-2, also came in a good well from a granite wash pay from 2,857-80 feet. It gauged 3,765 bbls. the first 24 hours.

Successful Deepening

One of the interesting features of this county during the week was the deepening of The Texas Company's No. 14 Bowers, in the NW cor. E half, Section 89, Block B-2, H.&G.N. Survey. It was formerly completed at a total depth of 3,040 feet, and production had dropped off to about 20 bbls. daily, but when completed this week at 3,085 feet, after topping a second pay of granite wash from 3,065-75 feet it flowed 1,445 bbls. the first 24 hours. As a result of this showing, and similar boosts in production by deepening, many other wells in the pool will probably be deepened.

Another sample of deepening increased M. L. V. Smith's No. 1 Waggoner, located in the NE cor., Section 35, Block 2, H.&T.C. Survey, Wilbarger County, from 8 bbls. daily to around 75 bbls. This well was completed in August, 1925, at 2,420 feet after topping the pay at 2,403 feet, and when it had slumped off to 8 bbls. it was drilled to 2,661 feet encountering a second pay at 2,639 feet. This well is southeast of the Sigler Pool and is producing from the deeper Milham strata, and other wells in this area will probably also be deepened to this new pay strata. Texas not only has shallow and deep, small and large, oil and gas wells to boost the country's total amount of production, but it has been discovered many times that deepening these same wells often helps boost their production, therefore when a well drops down to almost nothing daily it can sometimes be made into another good producer by rigging up anew, pulling the rods and tubing, and going in and hitting a few licks to deepen it and strike another good paying formation, putting another good well on production. Practically all of the pools of the Panhandle, Wichita Falls, Ranger and West Texas districts have witnessed this process, and companies and operators have found it quite profitable to deepen in many instances.

Lack of Water

Lack of water is slowing down drilling activities in the Wichita Falls district, for the protracted drought of the past two months has about consumed the available water supply in tanks and creeks and unless a heavy rain is forthcoming soon the entire industry in this district will be checked materially. In Wilbarger County many wells far from water supplies are already shut down, and possibly many others will follow in a short while. Archer County is another area which has suffered from lack of water, and activities in this county are at the lowest point registered in some time.

E. P. Campbell's No. 1 Maggie Alexander, in Section 23, E.T.R.R. Survey, northern Callahan County, which encountered the lower Tannehill sand last week from 1,036-55 feet and promised a new pool in this area, was completed this week for a 100-bbl. well but no line has been run to it yet, and it is questionable what arrangements will be made for marketing the oil. The Texas Company has the nearest pipe line, it runs about 3 miles north in Shackelford County, and perhaps a gathering line will be laid from the nearest point on this line to take the production from the Campbell discovery.

Wildcats in Shackelford

The Sedgwick Oil & Gas Co.'s No. 1 Morris & Buie, in Section 200, E.T.R.R. Survey, Shackelford County, has paved the way for renewed activity in the western part of the county near the town of Leuders, and the company is to drill two more wildcats in this area. One is to be in Section 191, and one in Section 170, both sections being east of the discovery well which came in last week for 30 bbls. from the Cook sand found at 1,585 feet. Total depth is 1,601 feet.

The Eastland Oil Co. brought in another good well in the Morris Pool, Coleman County, this week in its No. 10-A J. P. Morris, 250 feet from the south and east lines of Subdivision 24, William Webber Survey No. 722. The well was completed for 854 bbls. the first 24 hours. The Midwest Exploration Co.'s No. 3 I. Keeney, 750 feet from the north and 250 feet from the west line of the south half of Subdivision 4, P. Cochran Survey No. 269, encountered its first oil showing at 2,010½ feet and while drilling at 2,020 feet was flowing at the rate of 20 bbls. per hour, promising another good well for the pool. But the other wells which have come in for large production in this area have slumped off rapidly, not helping materially to boost the production of the county to any noticeable degree. This week the county showed a fair increase of 580 bbls. over the past week, but if wells of the above caliber would hold up Coleman County's daily average would increase considerably every week.

It has been reported that the Chestnut & Smith Corp. would erect a gasoline plant in this pool due to the fact that the gas has a high gasoline content, 2½ gallons of gasoline per 1,000 feet of gas. The Lone Star Gas Co. and the Oklahoma Natural Gas Co. have gas lines in the vicinity of the pool.

RANGER COMPLETIONS
Week ending August 10

Brown County

Beall, Gully & Michael's No. 1 Armstrong was dry and abandoned at 1,500 feet. Estacado Oil Co.'s No. 1 Bull had an initial production of 18 bbls. at 1,134-45 feet. Green Production Co.'s No. 8 Moore had an initial production of 20 bbls. at 1,255-80 feet. S. B. Owens and others' No. 2 Cannon had an initial production of 30 bbls. at 1,142-50 feet. The Texas Company's No. 3 Johnson had an initial production of 67 bbls. at 1,292-1,304 feet and was drilled to a total depth of 1,329 feet. Gore & Brown's No. 4 Mayes was dry and abandoned at 1,955 feet. Nystel and others' No. 1 Guyer had an initial production of 2 bbls. oil and 30 bbls. water at 1,080-85 feet and was drilled to a total depth of 1,090 feet.

Callahan County

Bradstreet & Holden's No. 4-A Cavenaugh made 40 bbls. at 1,649-82 feet. Their No. 14 Miller made 40 bbls. at 1,644-92 feet. Campbell's No. 1 Alexander had an initial production of 100 bbls. at 1,035-55 feet. Mook-Texas and others' No. 1 Johnson had an initial production of 15 bbls. at 1,599-1,619 feet and was drilled to a total depth of 1,651 feet.

Coleman County

Eastland Oil Co.'s No. 10 Morris had an initial production of 854 bbls. at 2,017-22 feet. Clark & Cowden's No. 1 Pirtle was dry and abandoned at 728 feet. Jones' No. 1 Rendleman was dry and abandoned at 1,750 feet. Mattocks & Midsun Oil Corp.'s No. 1 Hutchings location was abandoned. Smith & Shaffer's No. 3 Russell had an initial production of 1,968,000 feet of gas at 2,256-75 feet.

Eastland County

Atwood and others' No. 1 Ainsworth was dry and abandoned at 1,256 feet. Dyar Brothers' No. 2-B Cunningham was dry and abandoned at 3,618 feet. Kirk and others' No. 1 Oldham was dry and abandoned at 2,937 feet. Chestnut & Smith's No. 1 Fleming was temporarily abandoned. Thompson and others' No. 1 Green was dry and abandoned at 4,051 feet.

Palo Pinto County

Rochelle's No. 1 Diamond Furniture Co. was dry and abandoned at 435 feet.

Shackelford County

George Callahan's No. 8 Nail had an initial production of 10 bbls. at 1,529-50 feet. Dull & Earl's No. 2-B Matthews was dry and abandoned at 1,291 feet. Johnson Gilbert, Inc.'s No. 1 Moberly was dry and abandoned at 272 feet. Manning and others' No. 4 Moberly made 15 bbls. at 900-19 feet and was drilled to a total depth of 970 feet. Roeser & Pendleton's No. 12-A-88 Cook location was abandoned. Sedgwick Oil & Gas Co.'s No. 1 Morris-Buie had an initial production of 35 bbls. at 1,585-99 feet and was drilled to a total depth of 1,601 feet. Tannehill and others' No. 6 Matthews had an initial production of 50 bbls. at 1,142-65 feet.

WICHITA FALLS DISTRICT
Week ending August 10

Archer County

Bridwell Oil Co.'s No. 1 Andrews was dry and abandoned at 1,449 feet. L. T. Burns' No. 5 Wilson was dry and abandoned at 1,550 feet. United Producers & Petroleum Co.'s No. 2 Wilson was dry and abandoned at 1,682 feet. Its No. 1 Wilson was dry and abandoned at 1,610 feet. Bridwell and Continental Oil Co.'s No. 4 Logan and others had an initial production of 12 bbls. at 1,122-42 feet. Burns and The Texas Company's No. 1 Garvey was dry and abandoned at 1,266 feet. Humble Oil & Refining Co.'s No. 6 Kunkel had an initial production of 235 bbls. at 1,135-48 feet. Moran Drilling Co. and Independent Oil & Gas Co.'s No. 3 Bloodworth had an initial production of 10 bbls. at 1,220-28 feet. J. B. Peacock's No. 2 Williams was dry and abandoned at 586 feet. Petroleum Production Co.'s No. 8 Kunkel had an initial production of 82 bbls. first 24 hours at 1,115-73 feet. Its No. 9 Kunkel made 38 bbls. at 1,159-66 feet. Stump & Co.'s No. 1

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending August 12

CARSON COUNTY

Company, well, farm, name, section and block—	Remarks—
Baber and Shell Pet. Corp.'s No. 1 Percival, 330 ft. S and W, NE cor. E½ SE, Sec. 199, Blk. 3, I.&G.N. Sur.	Location.
Champlin Ref. Co.'s No. 4 McConnell, 990 ft. S and 330 ft. E, NW W½ NW, Sec. 67, Blk. 4, I.&G.N.R.R. Sur.	Location.
Delmar Oil Co.'s No. 5 Noel, 330 ft. S and W, NE cor. W½ SE, Sec. 198, Blk. 3, I.&G.N. Sur.	Location.
Empire G. & F. Co.'s No. 1 M. P. Co. "C," 330 ft. N and W, SE cor. NW, Sec. 108, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 475 ft.
Empire G. & F. Co.'s No. 2 Deahl, 660 ft. N and E, SW, Sec. 3, Blk. 5, B.&B. Sur.	Location.
Empire G. & F. Co.'s No. 1 Fuqua, 330 ft. N and W, SE cor. NW, Sec. 17, Blk. 3, A.B.&M. Sur.	Location.
Gulf Prod. Co.'s No. 1 Garner-B, 330 ft. N and W SE cor. SW, Sec. 106, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 2,840 ft; estimated 7,000,000 ft. gas.
Empire G. & F. Co.'s No. 2 M. P. Co. (Lane), C NE, Sec. 62, Blk. 4, I.&G.N.R.R. Sur.	Location.
Gulf Prod. Co.'s No. 3 Cooper, 330 ft. S and 990 ft. W, NE cor. SW, Sec. 5, Blk. 9, I.&G.N.R.R. Sur.	Location.
Empire G. & F. Co.'s No. 1 Deahl, 660 ft. from S and W lines, Sec. 3, Blk. 5, B.&B. Sur.	Location.
Gulf Prod. Co.'s No. 7 Noel, 330 ft. S and W NE cor. SW, Sec. 198, Blk. 3, I.&G.N. Sur.	U.R. 6⅝-in. csg. at 3,105 ft.
Herragan Oil Co.'s No. 1 L. C. McConnell, 330 ft. N and W line W½ SW, Sec. 187, Blk. 3, I.&G.N. Sur.	S.D. 2,550 ft.
Magnolia Pet. Co.'s No. 7 fee, 990 ft. from W line, 990 ft. from S line SE, Sec. 91, Blk. 4, I.&G.N. Sur.	Run. 8-in. csg. 2,175 ft.
Midwest Explin. Co.'s No. 3 Cooper, 990 ft. S and 330 ft. E NW cor. W½ NW, Sec. 5, Blk. 9, I.&G.N. R.R. Sur.	Drlg. 2,640 ft.
Midwest Explin. Co.'s No. 4 Cooper, 330 ft. N and E, SW cor. W½ NW, Sec. 5, Blk. 9, I.&G.N. Sur.	Location.
Osborne et als' No. 2 Percival, 330 ft. N and W, SE cor. E½ NE, Sec. 199, Blk. 3, I.&G.N. Sur.	Drlg. 1,810 ft.
Prairie O. & G. Co.'s No. 2 Nail, 330 ft. from N and W lines of N½ E½ SE, Sec. 198, Blk. 3, I.&G.N. Sur.	Location.
Reynolds et als' No. 2 Cooper, 330 ft. from S and W lines, E½ NW, Sec. 5, Blk. 9, I.&G.N. Sur.	Rig.
Ryan Oil Co.'s No. 4 Black, 990 ft. from N line and 330 ft. from E line NE Sec. 111, Blk. 4, I.&G.N. Sur.	T.P. 3,004 ft; T.D. 3,031 ft; 1,000 ft. oil in hole.
Ryan Cons. Oil Co.'s No. 5 Black, 330 ft. N and W, SE cor. NE. Sec. 111, Blk. 4, I.&G.N. Sur.	Location.
Skelly Oil Co.'s No. 18 Schafer, 990 ft. S and 355 ft. W. NE, Sec. 68, Blk. 4, I.&G.N. Sur.	Drlg. 1,020 ft.
Stubblefield's et als' No. 1 Garner, 330 ft. from S and E lines SE, Sec. 104, Blk. 4	Drlg. 1,250 ft.

(Continued on Page 115)

Ward was dry and abandoned at 1,138 feet. Williams' No. 1 Bounds was dry and abandoned at 1,152 feet. Young's No. 3 fee was dry and abandoned at 1,300 feet.

Clay County

Mid-Continent Oil Co.'s No. 1 Johnson-B had an initial production of 2 bbls. at 270-85 feet. Its No. 2 Johnson-B made 1½ bbls. at 270-85 feet. Its No. 4 Stine "A" made 1,000,000 feet of gas at 1,740-62 feet and was drilled to a total depth of 1,812 feet.

Cooke County

Benson Brothers' No. 1 Hoverkamp was dry and abandoned at 1,601 feet. Danciger Oil & Refining Co.'s No. 3 Huggen had an initial production of 358 bbls. at 1,143-50 feet. Faith Oil Co.'s No. 1 Campbell was dry and abandoned at 1,695 feet. Faith Oil Co.'s No. 1 Tomlinson was dry and abandoned at 1,334 feet. Humble Oil & Refining Co.'s No. 3 Fields-Bowers was dry and abandoned at 1,607 feet. Its No. 3 Poteet had an initial production of 198 bbls. at 1,454-68 feet.

Foard County

Shell and Fain-McGaha's No. 1 Johnson made 182 bbls. at 2,024-41 feet.

Grayson County

Murchison Oil Co.'s No. 3 Walls made 2,000,000 feet of gas at 890-97 feet. Sherman Oil Co.'s No. 2 Dalton made 3,000,000 feet of gas at 897-99 feet.

Jack County

Panhandle Oil & Refining Co.'s No. 1 Box had an initial production of 74 bbls. at 3,105-11 feet and was drilled to a total depth of 3,165 feet. Prairie Oil & Gas Co.'s No. 2 Bryson made 13,000,000 feet of gas at 3,150-58 feet.

Throckmorton County

Combest Oil Co.'s No. 1 Tuton was dry and abandoned at 827 feet. Hays & Hodges' No. 1 Matthews was dry and abandoned at 1,405 feet. Shappell Oil Co.'s No. 3 Upshur County School Land had an initial production of 25 bbls. at 1,242-60 feet.

Wichita County

Continental Oil Co.'s No. 3 Waggoner-C was dry and abandoned at 1,860 feet. Golding-Cochran's No. 8 Waggoner had an initial production of 120 bbls. at 1,291-97 feet. W. H. Hammon's No. 1-D Waggoner was dry and abandoned at 1,873-1,907 feet. Riner & Bailey's No. 6-B Michie was dry and abandoned at 1,320 feet. Melat and others' No. 1 Chilson had an initial production of 30 bbls. at 1,805-10½ feet.

Wilbarger County

Baker's No. 2 Waggoner was dry and abandoned at 1,961 feet. Barkley-Meadows' No. 2 Waggoner had an initial production of 160 bbls. at 2,411-28 feet and was drilled to a total depth of 2,430 feet. Burton's No. 1 Peckham Waggoner was dry and abandoned at 1,902 feet. Empire Gas & Fuel Co.'s No. 1 Waggoner had an initial production of 24 bbls. after having been shot with 15 quarts at 2,456-90 feet. Empire Gas & Fuel Co.'s No. 8 Waggoner had an initial production of 20 bbls. at 1,923-32 feet. Fain-McGaha's No. 14 Waggoner had an initial production of 144 bbls. at 2,290-2,315 feet. Its No. 15 Waggoner made 75 bbls. at 1,843-59 feet. Grayback Development Co.'s No. 1 A. Waggoner had an initial production of 100 bbls. at 1,857-69 feet and was drilled to a total depth of 1,871 feet. Its No. 10 Boggy Creek Waggoner was dry and abandoned at 1,901 feet. Peckham and others' No. 1 Waggoner was dry and abandoned at 2,014 feet. Phillips Petroleum Corp.'s No. 4 Waggoner had an initial production of 2,384-2,419 feet. Shappell Oil Co.'s No. 1 Smith was dry and abandoned at 3,138 feet. Staley-Wynne Oil Co.'s No. 9 Waggoner made 25 bbls. at 1,854-69 feet.

Young County

Boller and others' No. 3 Hunt was dry and abandoned at 1,050 feet. Their No. 4 Hunt was dry and abandoned at 1,038 feet. Carpenter's No. 3 Barrett had an initial production of 10 bbls. after having a 10-quart shot at 607-27 feet. Their No. 4 Barrett had an initial production of 30 bbls. at 591-633 feet. Cooper-Hill's No. 1 Hankens was dry and abandoned at 1,135 feet. McMeans' No. 1 Eichelberger was dry and abandoned at 907 feet. Perkins and others' No. 1 Clark was dry and abandoned at 850 feet. Perkins & Cullum's No. 1 Lemmond had an initial production of 45 bbls. at 729-35½ feet. Richardson & Dresser's No. 1 Dean had an initial production of 10 bbls. at 532-50 feet. Tucker-Miller's No. 1 Ward was dry and abandoned at 660 feet. United Royalty Co.'s No. 2 Carpenter had an initial production of 15 bbls. at 617-27 feet. Pandem Oil Co.'s No. 1 Burch had an initial production of 30 bbls. oil and 5 bbls. water at 4,282-4,328 feet. Its No. 1 Rhodes made 40 bbls. after a 250-quart shot at 4,012-25 feet. Scott & Nance's No. 1 Payne made 50 bbls. at 1,928-31 feet. Simms Petroleum Co.'s No. 2 Willis was dry and abandoned at 4,360 feet.

PANHANDLE COMPLETIONS

Week Ending August 10

Carson County

Empire Gas & Fuel Co.'s No. 1 Deahl, located 660 feet from north line and 660 feet from west line, Section 21, Block Y-2, topped the pay at 2,427 feet, was drilled to a total depth of 2,962 feet and had an initial production of 28,000,000 feet of gas. McConnel Oil Co.'s No. 1 J. C. McConnell, located in Section 65, Block 4, I.&G.N.R.R. Survey, was drilled to a total depth of 3,278 feet, plugged back to 3,200 feet, shot with 100 quarts at 3,000-75 feet with no results; 30,000,000 feet of gas was made from 2,508-2,850 feet, and 22,000,000 feet of gas from 2,947-60 feet. Ryan Oil Co.'s No. 3 Black, located in Section 111, Block 4, I.&G.N. R.R. Survey, was drilled to a total depth of 3,065 feet, was shot with 100 quarts from 2,982-3,050 feet and had an initial production of 210 bbls. the first 12 hours.

Gray County

Nabob Oil Co.'s No. 2 Morse, located 660 feet from west line and 330 feet from south line, SW cor., Section 67, Block 25, H.&G.N.R.R. Survey, topped the pay at 2,602 feet, was drilled to a total depth of 2,607 feet and had an initial production of 200 bbls. Phillips Petroleum Co.'s No. 4 Palmer, located in Section 31, Block B-2, had an initial production of 15,000 bbls. the first 24 hours and 25,000,000 feet of gas at 2,824 feet. Its No. 5-A Jackson made 3,100 bbls. the first 24 hours at 2,950-62 feet. Shell Oil Co.'s No. 3 McConnell was shot with 120 quarts at 3,130-3,210 feet with no results and was dry and abandoned. Phillips Petroleum Co.'s No. 6-A Jackson had an initial production the first 24 hours of 1,920 bbls. at 2,980-85 feet. The Texas Company's No. 9 Bowers had an initial production of 7,956 bbls. at 2,975-77 feet. Its No. 3 Cook-Faulkner made 201 bbls. at 2,793-2,850 feet and was drilled to a total depth of 2,875 feet. Its No. 6 Cook-Faulkner made 320 bbls. at 2,860-74 feet. Its No. 2 Patton made 102 bbls. at 2,897-2,905 feet and was drilled to a total depth of 2,960 feet.

Hutchinson County

Oil Operators Trust Co. and Continental Oil Co.'s No. 2 J. M. Sanford had an initial production of 20 bbls. at 2,993-96 feet and was drilled to a total depth of 3,039 feet. Orphan Syndicate's No. 1 Cockrell had an initial production of 10 bbls. at 2,985-3,015 feet and was drilled to a total depth of 3,040 feet. Sunny Jim Oil Co.'s No. 3 Pitts had an initial production of 35 bbls. of oil at 2,765-96 feet and was drilled to a total depth of 2,804 feet.

Moore County

Amarillo Oil Co.'s No. 2 Warrick, located in Section 92, Block 46, H.&T.C. Survey, was drilled to a total depth of 3,250 feet, was plugged back to 2,910 feet and made 60,000,000 feet of gas from 2,405-2,910 feet. Phillips Petroleum Co.'s No. 1 Taylor was drilled to a total depth of 3,507 feet, plugged back to 3,200 feet and tested 20,000,000 feet of gas from 2,825-3,040 feet. Skelly Oil Co.'s No. 8 Armstrong & Byrd, topped the pay at 3,125-31 feet, and had an initial production of 113 bbls. of oil and 118 bbls. of water on swab. Its No. 9 Armstrong & Byrd topped the pay at 3,138-41 feet and had an initial production of 193 bbls. oil.

Wheeler County

Gillespie and others' No. 1 McMurtrey had an initial production of 12,000,000 feet of gas at 2,810-3,090 feet and was drilled to a total depth of 2,447 feet. Lone Star Gas Co.'s No. 2 Griswold had an initial production of 51,000,000 feet of gas at 1,835-65 feet. Upham Gas Co.'s No. 3 Gooch made 25,000,000 feet of gas at 1,295-1,380 feet and was drilled to a total depth of 1,387 feet.

ESTIMATED DAILY AVERAGE PRODUCTION NORTH TEXAS

Week ending August 10

Panhandle District—	Prod.
Carson County	9,560
Hutchinson County	26,175
Gray County	75 594
Moore County	1,240
Potter County	....
Wheeler County	1,074
Total this week	113,643
Total last week	98,751
Increase	14,892
Wichita Falls District—	
Archer County	19,588
Baylor County	65
Clay County	717
Cooke County	11,078
Foard County	90
Jack County	3,770
Haskell County	101
Montague County	6,547
Throckmorton County	690
Wilbarger County	31,334
Young County	9,360
Wichita County	25,782
Total this week	109,123
Total last week	106,640
Increase	2,483
Ranger District—	
Brown County	7,695
Callahan County	4,110
Coleman County	6,390
Comanche County	1,205
Palo Pinto County	420
Eastland County	6,088
Shackelford County	10,995
Stephens County	6,750
Total this week	43,653
Total last week	43,586
Increase	67
Grand total this week	266,419
Grand total last week	248,977
Increase	17,442

NOVEL FEATURE FOR THE OIL EXPOSITION

(Continued from Page 40)

of the American Gas Association, and instructions are given for the asking.

The moving picture machine will have an important place in the auditorium program. This will make it possible to show men working under field conditions in fighting great oil well and tank fires, laying large pipe, properly shooting wells and the like.

The general manager is working out a schedule to assist the oil and gas companies in their plans to send groups of their superintendents, foremen and field men to the Exposition. This will care for the men in addition to those in the safety and first aid teams and those who will take part in the demonstrations.

The latest action of the executive committee of the Exposition has been to give official recognition to aviation as an important factor influencing the petroleum industry. An additional 40,000 square feet of land has been added to the oil show plant and this space will be devoted exclusively to aviation displays. Negotiations are under way to bring every type of airplane job from the tiny monocoupe to the giant four-motored Boeing. Besides the monoplane and biplane jobs there is expected to be a few built along unconventional lines.

Foreign exhibitors will be more numerous than last year and a number of foreign corporations have announced they will send their representatives to make large purchases at the Exposition. Among the countries already represented in the hotel reservations are Russia, Mexico, Canada, France, Germany, Rumania, Poland, China, Egypt, Venezuela, Colombia and Trinidad.

Following authorization of Congress, President Hoover, through Secretary of State Stimson, sent invitations to all the governors in the United States and to representative officials of all foreign nations.

Reduced rates have been granted to Exposition visitors on all of the lines in the United States, Canada and Mexico. This year the tickets will be validated on the grounds only. An added protection for the railroad companies will be the registration system put into effect for this year's oil show. Space for registration is reserved on all of the admission tickets to the Exposition.

Owners of the Drake, Murphy and Fox relics of the early days of the industry have said they will send these museum pieces to the Exposition. The Old Timers of the Oil Industry will have the replica of the Drake well on the grounds for headquarters. The model of the first derrick will be furnished as a club room.

The American Legion, the dozen Tulsa civic clubs and several of the meeting associations have banquets scheduled during the oil show and the Legion is planning a smoker which will probably include a boxing card and other entertainment features.

DIEHL CHIEF ENGINEER OF AMERICAN METER CO.

Announcement has been made of the appointment of John C. Diehl to the position of chief engineer of the American Meter Co. Since 1919, Mr. Diehl has been engineer with the Metric Metal Works Division at Erie, Pa. In that capacity he has been in charge of the Erie experimental laboratory, specializing in large volume, high pressure measurement. This laboratory has provided important results and its usefulness to the industry has been greatly extended under Mr. Diehl's direction.

As chief engineer of the American Meter Co., Mr. Diehl will co-ordinate all experimental activities now being carried on in the several factories. He will also supervise the introduction of technical improvements in products, and promote in general any findings of value to the practical application of measurement engineering.

A frequent contributor of technical articles to gas and oil journals, John C. Diehl is also the author of the revised edition of the Natural Gas Handbook, 1927. He assisted the late H. P. Westcott in the Handbook of Natural Gas, 3rd edition, 1920; Measurement of Gas and Liquids by Orifice Meter, 2nd edition, 1922; Handbook of Casinghead Gas, 3rd edition, 1922.

Mr. Diehl graduated in 1905 from Pennsylvania College, Scientific Course, and in 1910 from Massachusetts Institute of Technology, Civil Engineering. From 1905 to 1908 he served as engineer in the construction department of the Pennsylvania Railroad, and from 1910 to 1917 as engineer in the maintenance of way department. He served with the 25th Engineers, U. S. A. in the war from 1917 to 1919, being promoted from a first lieutenant to captain.

J. WALKER HANCOCK DIES

J. Walker Hancock, 46 years old, vice president and general manager of the Hancock Oil Co. of Long Beach, Calif., died August 3, following a prolonged illness. Beginning his oil career with the Great Western Refining Co. of Erie, Kans., in 1908, he remained with that company until 1911. In 1916 he became superintendent of the Cameron Refining Co. of Ardmore, Okla. In 1922 he went to Long Beach, where he was instrumental in the organization of the Hancock Refining Co., becoming vice president and general manager. In 1926 the Hancock Refining Co. was taken over by the Hancock Oil Co., Mr. Hancock remaining vice president and general manager. Mr. Hancock was born in Lynchburg, Va.

OIL AND GAS CONVENTION

CHATHAM, Ontario, Aug. 10.—Arrangements are being made for the joint convention of the Montana chapter of the Rocky Mountain Oil and Gas Association and the Oil and Gas Association of Alberta, to be held at Calgary September 18 to 20.

Pipe Line Construction News

SACRAMENTO TOO MAY GET KETTLEMAN GAS

SAN FRANCISCO, Calif., Aug. 10.—The Pacific Gas & Electric Co.'s natural gas pipe line being constructed from San Francisco to Buttonwillow, routed through the Kettleman Hills oil field, has about 55 miles to go before it is completed.

Crews are laying the line several miles outside the Kettleman Hills district, where it will tap the Milham Exploration Co.'s No. 1 Elliott, discovery well to pick up its output of approximately 60,000,000 feet of dry gas per day.

The pipe line will be continued to Buttonwillow, where it will tap nine dry gas wells, eight of which have been shut in for some time, awaiting a market. The total output of the nine wells at Buttonwillow, belonging to Milham, is said to be approximately 70,000,000 feet of dry gas per day.

The Pacific Gas & Electric's pipe line can handle about 125,000,000 feet of gas per day. From Buttonwillow to Kettleman Hills it will be a 16-inch line, from that point to a point near Fresno, it will be a 22-inch line, and from there to San Jose it will be a 20-inch line.

The company is said to be surveying right of way adjacent to the new line for another pipe line which may be built from the bay to Kettleman Hills, by way of Sacramento where it will be utilized to supply the valley towns in the northern part of the State.

NEW MICHIGAN LINE

The Michigan State Utilities Commission at Lansing, granted permission to the Buckeye Pipe Line Co., of Lima, Ohio, to lay a pipe line from Whiteford Township, Monroe County, Mich., to the plant of the White Star Refining Co., in Brownstown Township, Wayne County, Mich., at Trenton. The Whiteford Township end is located between Sylvania, Ohio, and Ottawa Lake, Mich., about 15 miles out of Toledo, where the big pump station and storage tanks are located along Highway 127. It will require the laying of almost 40 miles of pipe line to reach the plant of the White Star at Trenton. The White Star plant has just been completed with a daily capacity of 5,000 bbls., and may be enlarged at any time. By this connection the White Star can get oil direct from the Mid-Continent fields.

PRAIRIE TO WESTERN KANSAS

Prairie Pipe Line Co. has announced a new pipe line into western Kansas on which work has been started. This is the first entry of a major pipe line into the western part of the state which looks important at this time owing to numerous wildcat tests that have found oil in the past few months. The line will be 38 miles of 8-inch and will start from the Florence station in Marion County, to the new well of the Shell Petroleum Corp. in Section 1-20-2w, McPherson County.

UNDERSEA GAS LINE

LOS ANGELES, Calif., Aug. 10.—The Richfield Oil Co. has practically completed a 12-inch pipe line, 4,700 feet long, across Alamitos Bay channel, from Seal Beach to the Naples Gas Co. plant on the opposite shore. The line is for supplying gas. Instead of going to the expense of constructing an overhead conveyor which would have required a great deal of time, the pipe line was submerged. Permit for construction of the pipe line was recently granted by the War Department through the United States district engineer's office in Los Angeles.

INSTALLING NEW PUMPS

The Empire Oil & Refining Co. is installing eight new centrifugal pumps on an 8-inch oil pipe line between Oklahoma City and Cimarron. Two of these pumps will be placed at the Oklahoma City station, two at the Cimarron station and four at a new station to be constructed midway between Oklahoma City and Cimarron. This will increase the capacity of the pipe line from 22,000 to 35,000 bbls. daily. Four new 80,000-bbl. tanks will also be erected at the Oklahoma City station. August 15 has been set as a completion date for the new station and pump installations and it is estimated the first tank will be completed September 5, the second September 10 and the last two September 20.

LINE TO FORT SCOTT

Construction of an 8-inch natural gas pipe line, approximately 50 miles long, from the Petrolia, Kan., compressor station to Fort Scott is announced by Cities Service Gas Co. Work on this extension of the main pipe line system will begin on completion of the survey, and natural gas will be turned into the line by November 1.

The project involves the purchase of the pipe lines and production of the Union Gas Co., now supplying Fort Scott, which will continue in operation. In addition to giving Fort Scott a supply of natural gas for domestic and industrial consumption, service will be available also to Nevada, Mo., and cities adjacent to the area traversed by the line.

The Fort Scott connection will be made direct to the three 16-inch lines into the Petrolia station which receives gas from the southern Kansas and Oklahoma fields.

PROGRESS ON SHREVEPORT LINE

SHREVEPORT, La., Aug. 10.—At the rate construction is progressing, the Arkansas-Louisiana Pipe Line Co.'s (Arkansas Natural Gas Corp.) 20-inch line from the Richland and Monroe Fields to Shreveport and Longwood will be completed ahead of contract date. Right of way has been cut and cleared for the full distance and 110 miles of pipe strung. Sixty-two and a half miles has been ditched, 51 miles welded, 60 miles painted and 53 miles lowered and backfilled. Welding crews have made 5,652 20-inch and 88 23-inch welds, and 6,402 20-inch couplings, three 20-inch and two 8-inch gates and two drips have been installed, as of August 1. Construction began in June, Williams Brothers of Tulsa, having the contract.

TURNER VALLEY CONTRACT

CHATHAM, Ontario, Aug. 10.—Alberta Pipe Line Co., a subsidiary of the Regal Oil & Refining Co. of Calgary, Alberta, has let the contract for a 4-inch oil pipe line from the Turner Valley Field to Calgary, to the Commercial Cartage Co. of Calgary. The cost is approximately $150,000. The line, approximately 28 miles long, will extend from the Spooner lease in the north end of the field to the Regal refinery, south of Calgary. It is planned to establish later a tank farm on the east ridge of Turner Valley so that oil may be run under gravity; but in the immediate future it will be pumped.

LAREDO-DEL RIO LINE

The Witherspoon Oil Co. is reported contemplating a 10¾-inch line from Laredo to Del Rio, Tex., a distance of 200 miles.

REPORTS OF TWO LINES FROM TEXAS TO CHICAGO

By B. E. V. Luty

PITTSBURGH, Pa., Aug. 12.—Pipe mills are not excited over reports that there will be two natural gas lines from Texas to Chicago in the near future. While it has been generally reported that one line has been let there is no official confirmation of this in the pipe trade and pipe mills feel that this line would cover the ground, the reported second line being unlikely to come to a head in the near future.

There is a large amount of line pipe business on the books of pipe mills and no occasion for the mills to seek additional business of that description in the nearby future. It should be mentioned that the 14,000 tons of 6-inch to 12-inch feeder pipe reported last week as ordered from National and Republic by the Southwestern Gas Co. is for the Monroe-Birmingham-Atlanta line, not the Chicago line as originally reported.

In the year to date the total production of welded and seamless tubular goods has greatly exceeded that in the same period of last year. In standard or merchant pipe there appears to have been a slight increase, as some mills report increases in their business while one or two have had a falling off. In oil country goods, outside of line pipe, there has been a slight increase, not because business has really been active but because it was light last year. In line pipe there has been a large increase. Pipe producers now consider it probable that total production of tubular goods in the second half of this year will exceed that in the first half.

Pipe mills are now running at fully 55 per cent, with seamless tube mills at about 70 per cent, making about 60 per cent for the industry. This is slightly above the general average for the first half of the year.

For this time in the year the condition of the steel trade in general could hardly be better, for production has been very heavy yet the momentum of demand seems to be fully maintained, with allowance for the point that naturally little forward buying is done at this time. Steel production in the early months of the year ran far above any previous record, and then there was virtually a complete absence of the seasonal decline, to July, that has always marked the industry in the past. Such trifling decrease as may have occurred is attributable to hot weather and the necessity of making repairs. A few small mills, with products not sufficiently diversified, are making a little less steel. With the large companies, decreased rail production and decreased requirements of the automobile industry have released steel, which thereupon has been diverted to other finished products. Plate mills in particular are being given more steel, and detached sheet and strip mills, which largely depleted their supplies of semifinished steel during the second quarter, have been receiving heavier deliveries whereby they have been replenishing their stocks.

While the steel industry is going strong, particularly for this time of year, there is divergence of opinion as to details, just how strong it is going to go for the remainder of the year. It is normal for there to be less demand in the second half than in the first half of the year, chiefly on account of rails and automobiles, and a 10 per cent decrease in production would really represent a continuance of the general condition, but it might easily result in some price weakness. Some observers, however, suggest that general commercial activity may increase farther, giving the mills as full occupation in the next few months as formerly.

Black and galvanized sheets have slipped off slightly in the last few weeks, as reported. There does not seem to be any increased weakness in the past week. Shading in wire nails has now become widespread, almost universal, and nails may be quoted at $2.55 to $2.65 against $2.65 to $2.75, the advanced prices quoted since the first of the year.

BRADFORD'S $400,000 PROJECT

BRADFORD, Pa., Aug. 12.—The Petroleum Reclamation Co. has plans made for supplying its hill top leases in the Bradford Field with a large volume of water for flooding purposes. The company will drill wells in the bed of the Allegheny River and on the banks of the stream in New York State and force it through a 24-inch pipe line a distance of 9 miles from the water wells to its hill top leases in Pennsylvania. Repressuring the Bradford sand with water under the most modern five spot method of drilling requires on hill side and hill top leases a much greater supply of water than the natural springs can furnish. The Petroleum Reclamation Co. expects to invest $400,000 in this new water supply system. Contract has been let to Thomas Aloe of Pittsburgh for laying the pipe line.

SINCLAIR PIPE LINE

The Nebraska State Board of Assessment has refused to cut the $3,084,000 valuation placed last year on the Wyoming pipe line of Sinclair Pipe Line Co. to $750,000, as requested by company officials, who claim the Teapot Dome decision has made it the value of junk alone. They say there is no prospect that the company will use the line, which goes through several counties in Nebraska. Half the pumping units have been removed. The board conceded that the value had shrunk, but placed the valuation at only $258,000 less, or $2,826,000.

PROGRESS IN MONTERREY LINE

Ten miles of the 12¾-inch line being constructed for the United Gas Co. from Zapata County, Tex., to Monterrey, Mexico, have already been laid toward Roma, Tex., where it will cross the Rio Grande. The remaining 135 miles of right of way in Texas and Mexico have been entirely cleared, ready for the pipe laying machines, and about half of the pipe required is already on hand.

STANDARD OF CALIFORNIA LINE

Standard Oil Co. of California has announced that its 70-mile 10-inch pipe line from Kettleman Hills to Estero Bay will be completed by October. The line will have a capacity of 35,000 bbls. daily and will cost more than $1,000,000.

There will be one pump house on the line located in Section 19-22-17, some 4 and 5 miles southwest of the No. 1 Elliott, discovery well of the field. The line is now approximately half welded.

GAS FOR KETTLEMAN CITY

LOS ANGELES, Calif., Aug. 10.—The laying of the gas mains in Kettleman City by the West Side Natural Gas Co., is practically completed and the pipe crew is now at work 2½ miles southeast of the Laguna Vista service station laying the main to the Dudley well which is to supply the gas. If the satisfactory progress in construction of the line continues, Kettleman City residents will be using natural gas in a very short time.

PETROLEUM RECOVERY BY NATURAL METHODS

(Continued from Page 39)

With these facts before us relative to the properties of gas, it becomes evident that in order to secure the greatest ultimate recovery by natural methods, it is important to conserve gas and to utilize its many natural qualities. Natural or casinghead gas should not be used for any other purpose until every consideration has been given to its use for the recovery of oil. In fact, the use of gas, when available, is important in the recovery of oil regardless of the method of recovery.

Some of the methods which for many years were considered legitimate and justifiable in oil recovery, are now generally condemned by efficient producers. It is bad practice to allow a well to blow wide open into the atmosphere until it reduces the gas pressure sufficiently to allow oil to enter the well. Under such conditions the gas closed in would conserve the energy in the form of pressure, which would drive oil into other wells which may be drilled lower down on the structure and where the casing of the well would shut off the gas sand, but permit oil containing absorbed gas to enter under a low gas-oil ratio, which means a greater ultimate recovery of oil.

Another practice now obsolete with modern producers, is one in which the casing point is set too high when the pay horizon lies below but adjacent to a general gas body, and in a comparatively level formation, so that a lower location cannot be made. Under such a condition, the casing must be set through the gas sand, and cemented with the casing point just a little below the top of the oil pay. To illustrate this, a sketch would show no open hole above the actual oil bearing formation. This compels the gas energy to be expended by forcing gas through the oil, which results in greater ultimate recovery. One need only to consider the many qualities of natural gas, to understand how best to utilize the forces and qualities which it contains.

Water Pressure

Water pressure often plays an important part in the recovery of oil, due to the flooding of the reservoir rock or sand, thereby a water drive created forces the oil along to the well. Water is not an elastic substance and unlike gas it depends upon gravity in place of compression, for the store of energy which it contains. In every region, there are stratified beds of boulders, sand, shale, etc. These have been deposited by water or in some cases by wind. We might stop here and go into a study of geology and explain how there are constantly being laid down along the sea coasts new sediments, and that the coast lines are constantly rising or falling; but let it suffice that there are such deposits which are more or less parallel and which are separated by layers of impervious rock, clay, or shale, and that these form the reservoirs where oil, gas and water are confined, and that each of these elements being fluid and of different gravities, is trying to separate from the other.

Salt water is heavier than either fresh water, oil or gas, and we find salt water present in most oil pools. This is often supplemented by more or less fresh water which from the surface of the earth has drained down through some crevice or outcrop.

All the water gravities to the lower point in the structure. The oil floats upon the water, and therefore is found higher upon the structure. The gas rises to the high point of the structure, all of which must seem perfectly simple to one who gives it a little thought. Now it is found in many pools that the water has connection with a supply that is constantly trying to follow up into the reservoir to occupy the space where the oil and gas are located, and as fast as it is possible to do so it flows into the higher part of the reservoir as the oil and gas are removed from the well. In this way, the force of the water pressure is utilized to drive the oil from below, and at the same time keeps the gas compressed. Therefore, it becomes important to utilize the gas, and prevent the water from entering the well. A well located at a point low on a structure will produce water when one higher up may produce oil, and one at or near the top will produce gas so long as gas is present. If the gas is not allowed to escape except through the well producing the oil, then its energy will be utilized to drive the oil from the sand into the oil well, and if the water is prevented from entering the oil well until such time as the gas has been utilized and the oil is fairly well recovered, the recovery of oil may continue economically by entrainment with the water until such time as the oil so recovered is reduced to a quantity which will not pay the expense of operation. When this occurs, we have accomplished ultimate recovery by this method.

Gravity

It is obvious from what has just been said that gravity has an important part in the separating of the liquids from the gas, as well as in separating the two liquids, water and oil. Gravity accelerates the flow of water, which compresses the gas and also causes the water to flow into the reservoir and maintain pressure as the oil is recovered. It is due to gravity that a balance is maintained between the compressed gas, which by nature has been trapped in the high part of the structure, and the water pressure created by the elevation of the source of supply from which the water comes.

This fact has been made use of by the writer for the purpose of calculating and estimating the probable rock pressure which may be found when a new pool is first discovered. While the rule he uses may not always be correct, it is much better than he has ever been able to guess, so he gives it here for what it may be worth.

Assuming the source of supply is at the average elevation of the surface of the ground of the surrounding country, and assuming the water is all fresh water, then each foot of depth to which the well has been drilled will give a water column of the same depth to balance the gas which is compressed in the reservoir; but a column of fresh water weighs .43 of 1 pound per square inch for each foot of the height, and therefore the rock pressure should be, for example taking a well 2,000 feet deep, .43 of 2,000, or 860 pounds ($2,000 \times .43 = 860$).

One of the applications of gravity which has as a rule the least affect on the recovery of oil, but an application that is to be considered of some importance, in special cases, is the use of it to drain the oil from the sand into the well when there is little or no gas or water to aid the flow of the oil. Many wells in old pools have been drilled deeper when they have reached this state in the recovery process. In this manner a sump formed at the bottom of the wells forms a depository into which the oil may gravitate before being removed by some mechanical means.

Combination of Natural Forces

It seldom occurs that only one of the three natural forces can be utilized in the process of the recovery of oil. The important problems for the producer of oil is to control the forces which nature has provided, so that he may utilize most economically all of them. By doing so he will be assured the greatest ultimate recovery.

Economic Results

As to the results obtainable by using as completely as possible all of the natural forces in the recovery of oil, there is little question in the minds of men who have given the subject any amount of thought. Under the management of a skilled producer who does all that can be done to control and utilize the forces, there is reason to believe a greater ultimate recovery will be realized from any pool than can be otherwise. There is no way to forecast accurate results that one may expect from a pool before it has been tapped, and it is general practice to keep a log of the production from the time the first well is drilled. Each well produces the greatest amount of oil in the early part of its history. This is just after it is first drilled into the oil reservoir, at the time that it is drilled deeper, or at the time it is given a shot.

The lease or pool produces its greatest amount of oil at some time in its early history, depending upon the extent to which the new wells have been drilled, but in time a natural decline for the pool or lease begins to be of a character which permits one to construct a curve which will forecast the future amount that may be recovered. An example of the decline to the ultimate production of the lease is given here. This lease, located in the central part of the old Oklahoma fields, is typical of the results which have been obtained.

The decline curve gives the rate at which oil is produced, and the accumulated production curve shows the total accumulated production as the lease and property declines.

Recovery by natural gas methods is good to a certain point, but there arrives a time in most producing pools when artificial methods can be employed economically, and in this connection the factor which may mean much to the producer is one of time. There can be much consideration given to how far to utilize natural methods of recovery, and when it may increase the economic results to combine natural with artificial methods, and thereby secure the greatest possible ultimate recovery to the economic limit.

MOUNT CALM SHALLOW CHALK POOL OPERATIONS WERE DISAPPOINTING

By Neil Williams

CORSICANA, Tex., Aug. 12.—At Boggy Creek, Humble Oil & Refining Co. late in the week had not completed its No. 3-A Todd, which was to have been an extension to the south of the main pool on the southeast flank. This well blew in as a small gasser at 3,728 feet but was killed and at latest report was going deeper.

The new Mount Calm shallow chalk pool of Hill County probably is to get its second small pumper in Harper & Starkey's No. 1 Jones, which reset 6⅝-inch casing at 690 feet after formerly testing dry. It has 300 feet of oil in the hole and is rigging to pump. Although the discovery well continues to pump steadily, all other operations in the shallow chalk have been disappointing, and one of these shallow tests, deepened to the Woodbine sand in an attempt to find production there, tested salt water and was abandoned. The Woodbine in this test, McElmurry and associates' No. 1 Coates, was found at 1,372-80 feet, and the hole was deepened to 1,420 feet in lime.

On the Boggy Creek Dome, Humble Oil & Refining Co.'s No. 4 Holloway is drilling chalk at 2,701 feet; No. 2 Neches is drilling sand at 175 feet, and No. 4-A Elliott & Clark is drilling sand and boulders at 1,045 feet. This company's No. 2 Beard, a southwest extension test, is ready to start drilling, and during the week two other locations, No. 4 Lizzie Smith and No. 2 Purvy, were made and these are being rigged up. Magnolia Petroleum Co.'s No. 1 Williams, on the north side of the dome, has started drilling.

Humble's No. 4-A Southern Pine, on the Posey Saline, Anderson County, is drilling shale at 344 feet, and Pure Oil Co.'s No. 1 Jackson, on the Bethel Dome, same county, is drilling sand and lime at 4,816 feet. Magnolia Petroleum Co.'s No. 1 Duran, Loller Survey, Rusk County, is drilling gummy shale. Louisiana Petroleum Co.'s No. 1 Alford, Rusk County, is drilling broken chalk at 2,760 feet. Amerada Petroleum Corp.'s No. 1 Wade, Upshur County, is resuming drilling in dry sand and shale at 5,103 feet after being down a short time. A. M. Wilborn's No. 1 Hudspeth, Upshur County, is in a salt water sand at 3,212 feet.

W. D. Alexander and associates' No. 1 Anderson, Robertson County, Webb Survey, still is shut down with drill stem stuck at 3,340 feet.

Nash and associates' No. 1 Adams, Borren Survey, northeast of the Currie Field, is drilling broken lime at 3,304 feet. Killiam & Phillips' No. 3 Bryant, Naber Survey, McLennan County, is drilling red beds and streaks of shale at 1,365 feet. C. F. Lytle's No. 1 Thompson, Mexia Trinity test, Limestone County, is trying to clean hole of stuck drill stem, preparatory to drilling deeper from the sand at 6,068 feet.

In Leon County, Patty and associates' No. 1 Randall is drilling packed sand at 1,002 feet, and Reiter and Baggett's No. 1 Busby is drilling shale at 820 feet. Haley & Young's No. 1 Night, Freestone County, is in hard shale at 4,310 feet.

Daily average production of the division for the week ending August 10 was:

EAST CENTRAL TEXAS

Boggy Creek	2,665
Cedar Creek	70
Currie	593
Hill County	20
Mexia	5,376
Minerva	655
Nigger Creek	340
Powell	7,007
Richland	49
Thrall	32
Wortham	1,260
Total	18,047
Week Ending August 3	19,719
Decrease	1,672

TANKER RATE FACTOR IN GASOLINE MARKET

(Continued from Page 40)

over that in effect at the start of the year. This gives Gulf Coast refiners an advantage over East Coast interests in marketing the Southwestern gasoline at Baltimore, Philadelphia, New York, Boston and Providence.

Firmness in the intercoastal market on tankers for transporting crude oil and fuel oil is a constructive factor in the present situation, from the standpoint of Eastern operators. With a freight charge of 88 cents per barrel on fuel oil, this product, at the current price levels, would gross back but 17 cents a barrel to Pacific Coast sellers in Eastern markets, with the net price materially lower after handling and storage charges had been deducted. Even on the basis of a $1.25 market for bunker "C" fuel oil at East Coast terminals, 20 cents over the prevailing figure, Pacific Coast sellers would have but 37 cents a barrel over and above shipping costs to work on, hardly an attractive figure to an overstocked refiner or operator. This situation, therefore, would appear to make the menace of any great competition from California fuel oil in East Coast markets a negligible factor

The market for California gasoline transportation to the Atlantic Coast is also in strong position. The current figure, while 11 cents per barrel under the peak figure for the year, is more than 50 per cent above the low quotation in effect at the start of 1929. Based on the inside verified price for U. S. Motor gasoline in East Coast markets at present, California gasoline if sold in the East at the same basis would gross back about 7¼ cents per gallon to the California seller, from which handling, storage, and other costs would have to come. This condition is reflected by the fact that no spot California cargo transactions have been reported in the East for several months, all of the movement being for the account of large companies with production in California and marketing outlets in the East, or contract deliveries by Western refiners to East Coast distributors.

With charter rates for transatlantic clean tonnage nearly double those in effect at the beginning of the year, recent dullness in the export gasoline markets at the Gulf is in part accounted for. The persistence at which controlling interests have maintained export gasoline at the Gulf in the face of falling domestic prices has also been no small factor in narrowing down European demand for American motor fuel.

OKLAHOMA FIELDS

(Continued from Page 50)

little chance of making a commercial well and it will probably be abandoned in the near future. E. L. Martin and others' have announced a new wildcat test in Section 32-8-25w, Beckham County, about 6 miles south of the Fred Coogan test. Martin and others' test is being drilled on a magnetometer survey and is in the center of a large block. It will be a 3,000-foot test. The Indian Territory Illuminating Oil Co.'s No. 1 fee in the C SW NE, Section 17-6-24w, Beckham County, is reaming at 1,200 feet, while the total depth is 1,900 feet in granite.

North of the Wirt Franklin's test, No. 1 Spain, in Section 9-2s-6w, Stephens County, which is making around 400 bbls. a day, Rankin and others are blocking 800 acres in Sections 26, 27, 34 and 35-1s-6w, Stephens County, and it is expected a test will be commenced in the near future.

The Texas Company's No. 1 Cobb, in the SE cor. NE NE, Section 1-2s-5w, Stephens County, is drilling at 3,630 feet, in shale with nothing showing and it may be abandoned soon. Amerada Petroleum Corp.'s No. 1 Dulaney, SE cor. NW NW, Section 31-4s-9w, an important wildcat test has landed 6-inch casing at 3,212 feet and is cleaning out to drill deeper. Wirt Franklin's No. 1 Van, SW cor. NW NW, Section 4-5-9w, Caddo County, is still fishing at 5,600 feet while the total depth of the hole is 5,855 feet in blue shale.

Houston Oil Co.'s No. 3 Wyatt, in the NE cor. SW, Section 17-7-4, Pottawatomie County, flowed 50 bbls. in the first 30 minutes from the Simpson lime pay at 4,060-85 feet. This test is an important extension to the St. Louis Pool.

The gauges of the various pools in the Greater Seminole area are showing declines in most cases. The following are gauges for August 12:

Pool—	Bbls.
Little River	78,135
Carr City	12,277
Maud	13,989
Mission	26,745
Bowlegs	32,737
Earlsboro	81,248
Seminole	34,138
East Seminole	5,589
Searight	11,447
St. Louis	72,395
Asher	11,039
Sasakwa	7,139
Total	386,886

The daily average pipe line runs from the Seminole Field for the last week, were as follows:

Company—	Bbls.
Barnsdall	4,371
Champlin	4,454
Continental	1,390
Consolidated	576
Cosden	7,884
Empire	9,915
Gulf	46,301
Independent	none
Magnolia	21,614
Oklahoma	59,619
Prairie	53,594
Producers & Refiners	1,964
Pure	5,087
Shaffer	2,716
Shell	10,485
Sinclair	29,633
Texas	17,403
Tidal	17,413
White Oak	2,494
Total	296,313
Tank cars	7,455
Grand total	304,368

Spears Drilling Co.'s No. 1 Labor, NW cor., Section 17-1-2, Murray County, found water at 2,510 feet, and is pulling the casing to abandon. This test had a showing of oil and gas at 2,185-2,228 feet, and it being a wildcat well caused considerable excitement. The showing of oil was exhausted and the test drilled deeper.

Operations in the Muskogee district are mostly shut down owing to the shortage of water for drilling purposes. Three wells were completed in the Boyle Field, in Section 8-15-15. Mack Drilling Co. and Troutt Drilling Co., each completed a 15-bbl. well. Babcock Brothers deepened an old well to the Wilcox sand and added 12 bbls. new production.

Carter County

Ven Mex Oil Co. has the rig up for No. 2 Dixon, SW cor. SE NW, Section 30-1s-3w. Cotton Belt Oil Co.'s No. 9-C Rexroat, NE cor. NW NE SW, Section 10-4s-2w, has been completed for 165 bbls. in sand at 1,787-1,961 feet.

Creek County

Empire Oil & Refining Co. has the rig on the ground for No. 2 Bigpond, NE cor. SW NW, Section 36-15-7. Peters Petroleum Corp.'s No. 4 Arsayalee, SW cor. SE NE, Section 21-16-8, is rigging up. Texas Pacific Coal & Oil Co.'s No. 3 Beaver, SW cor. NW NW, Section 17-16-9, is an old well rigging up to deepen. No. 5 Beaver, NW cor. SW NW, Section 17-16-9, is also rigging up to deepen. Sinclair Oil & Gas Co.'s No. 23 Keys, SE cor. NE SE SE, Section 28-17-7, drilling at 2,040 feet. Producers & Refiners Corp. made location for No. 1 Elmore, SW cor. NW NW, Section 10-19-7.

Franchott Oil Co.'s No. 31 Kiefer, SW cor. NE SW, Section 17-17-12, is pumping 15 bbls. from sand at 1,418-92 feet. Pure Oil Co.'s No. 22 S. Crow, SW cor. NW NE NE, Section 5-18-7, is pumping 70 bbls. from sand at 2,604-52 feet. Pure Oil Co.'s No. 5 Wacoche, NE cor. NW, Section 20-18-7, made a 20-bbl. well in sand at 2,508-49 feet. The Prairie Oil & Gas Co.'s No. 2 Ladd, NW cor. NE SE, Section 18-16-9, has been deepened to the Dutcher sand at 3,042 feet and abandoned.

Garfield County

Oil States Co.'s No. 1 Barnes, SW cor. NE NW, Section 15-23-3w, is dry and abandoned at 5,168 feet.

Grant County

Champlin Oil & Refining Co.'s No. 1 Crabb, NW cor. SE SW, Section 36-28-3w, is rigging up.

Hughes County

Magnolia Petroleum Co. has the rig on the ground for No. 1 Dimment, NE cor. NW SW, Section 8-6-8. The Texas Company's No. 1 Bryant, SE cor. NE SW, Section 9-6-8, is pumping 100 bbls. from sand at 2,650-66 feet.

Kay County

B. E. Holden's No. 1 Hitch, C NW SW, Section 19-28-1, has been completed for 250,000 feet of gas in sand at 1,025-30 feet.

Lincoln County

F. R. Billingslea and others' rig is up for No. 1 Davis, SE cor. NE NE, Section 28-17-6.

Logan County

Shell Petroleum Corp. has the cellar dug for No. 3 Storey, SW cor. SE SW, Section 30-19-4w, Roxana Pool. J. S. Cosden has dug the cellar for No. 2 Gardner, NW cor. NE NW, Section 31-19-4w. The rig is being built for No. 3 Gardner, SE cor. NE NW, Section 31-19-4w.

Skelly Oil Co. and Independent Oil & Gas Co.'s No. 1 Elrod. NE cor. SW, Section 31-19-4w, is a cellar. J. S. Cosden's No. 1 Gardner, NE cor. NW, Section 31-19-4w, has been completed for 5,083 bbls. in Wilcox sand at 5,952-55 feet.

Marshall County

William Hewitt and others' No. 1 Lynn, C NE, Section 6-6s-5, has been abandoned at 760 feet.

Okfuskee County

Champlin Oil & Refining Co. made location for No. 16 Carter, NW cor. SE SW, Section 15-11-11. No. 10 Holmes, NE cor. NW, Section 22-11-11, is a rig on the ground. Shepard and others' No. 1 Shepard, SE cor. NW SW, Section 3-12-10, is rigging up.

Champlin Oil & Refining Co.'s No. 3 Jefferson, SW cor. Section 14-11-11, has been completed for 12 bbls. in sand at 1,677-82 feet. No. 14 Holmes, NE cor. Section 22-11-11, made an 8-bbl. well in sand at 1,639-63 feet. C. L. McMahon & Carey's No. 1 Foster, NE cor. NW, Section 32-12-10, has been completed for 6,250,000 feet of gas in sand at 3,090-3,173 feet.

The Prairie Oil & Gas Co. and T. B. Slick's No. 1 Scott, SE cor. NE, Section 25-10-11, is dry and abandoned in Lyons sand at 3,155-65 feet. Dixie Oil Co.'s No. 2 Drew, SW cor. Section 8-13-18, made a 20-bbl. well in Dutcher sand at 2,675-2,805 feet after it was plugged back from 3,450 feet in Wilcox sand.

Producers & Refiners Corp.'s No. 5 Monarye, SE cor. Section 29-12-10, has been completed for 150 bbls. in sand at 2,903-21 feet.

Oklahoma County

Indian Territory Illuminating Oil Co. and others made location for No. 4 Trosper, SW cor. SE SW, Section 13-11-3w, Oklahoma Field. No. 1 E. Fortson, SE cor. NE, Section 24-11-3w, is rigging up to deepen from 3,953 feet. Location has been made for No. 3 K. Kenning, SE cor. SW SE, Section 24-11-3w. No. 2 Johnson, NW cor. Section 25-11-3w, is a location. Location has been made for No. 3 Johnson, SE cor. NW, Section 25-11-3w. The Prairie Oil & Gas Co. and T. B. Slick's No. 1 Hiddleston, SW cor. SE, Section 19-11-2w, made 3,560 bbls. from sand at 6,422-33 feet.

Okmulgee County

Sheridan Oil Co.'s rig is up for No. 1 Friday, SE cor. NE NW, Section 24-15-11. S. J. Mathews' No. 1-A Hughes, NE cor. Section 21-16-11, is rigging up. Marquette Oil Co. and others' No. 6 Williams, NW cor. NE NE, Section 22-13-12, has been abandoned at 2,926 feet. The Prairie Oil & Gas Co. made location for No. 2 Palmer, C NW SW, Section 29-13-12.

J. H. Rebold and others' No. 2 Brooks, CNL SW NE, Section 6-15-13, is rigging up. Kirkland & Son moved a machine in for No. 4 Brooks, SW cor. SE SW, Section 17-15-13. No. 3 M. Price, NW cor. NE NW, Section 20-15-13, has been completed for 10 bbls. in sand at 1,458-1,662 feet. Laurel Oil Co.'s No. 3 B. Carter, CEL SE SE, Section 10-15-14, is dry and abandoned at 1,561 feet.

Osage County

Mundy and others made location for No. 2, SE cor. NE NE NE, Section 10-21-8. McCune, Wormser and others' No. 3, SW cor. NE NE, Section 15-24-8, is a rig. The Texas Company moved a machine in for No. 8, SE cor. NW SE, Section 30-25-8. Peters Petroleum Corp. and others moved a machine to the location for No. 6, NW cor. SW SE, Section 22-27-11.

Indian Territory Illuminating Oil Co.'s No. 410, SE cor. SW SW NW, Section 8-24-9, has been completed for 8,500,000 feet of gas in Wheeler sand at 1,792-1 809 feet. Stoner Brothers and others' No. 4, CSL NW, Section 31-24-9, made 15 bbls. in Bartlesville sand at 2,134-51 feet. L. G. Stanley and others' No. 2, SW cor. NW NW NW, Section 15-25-8, is dry and abandoned at 2,506 feet.

W. K. Cottrell and others' No. 56, SW cor. NE NW, Section 22-25-12, drilled to 1,483 feet, is dry and will be used for an air hole. Harland Oil Co.'s No. 86, NW cor. SW SE, Section 21-25-11, made 15 bbls. in Bartlesville sand at 1 660-1.742 feet. Duffield and Howard Petroleum Co.'s No. 1, SE cor. NW, Section 33-26-7, is dry and abandoned at 3,101 feet.

Payne County

Comail Oil Co.'s No. 2 Garr, SW cor. NE SW, Section 9-19-5, is drilling deeper at 3,430 feet. Magnolia Petroleum Co.'s No. 2 Jennings, NW cor. SW, Section 10-18-5, made a 12-bbl. well in sand at 2 915-50 feet. Pure Oil Co.'s No. 1 Brown, NE cor. SW NE, Section 5-19-5, has been completed for 10 bbls. in sand at 3,602-25 feet.

Pawnee County

Superior Oil Corp. moved a machine in for No. 1 Brodell, NE cor. NW NE, Section 20-20-9. Geraldine Oil Co.'s No. 2 Edminston, NW cor. SE NW SW, Section 30-21-9, is a machine rigging up. The Prairie Oil & Gas Co.'s No. 10 McNeal, SW cor. NE NW, Section 10-29-8, made 10 bbls. in sand at 2,465-85 feet. Short & Mann's No. 1 Blackmer, NE cor. Section 22-20-9, swabbed 35 bbls. from Red Fork sand at 1,921-43 feet. McMan and others' No. 1 Mitchell, NW cor. SW SE, Section 27-20-9, drilled to 2,127 feet in Bartlesville sand and plugged back to 1,900 feet and was completed for 750,000 feet of gas.

Pottawatomie County

T. B. Slick made location for No. 1 Ready, NE cor. Section 24-6-3. Location has been made for No. 2 Alexander, SE cor. NW SE, Section 19-6-4, Asher Pool. Superior Oil Corp. and Gypsy Oil Co. made location for No. 1 Blackbird, SE cor. NE NW, Section 19-6-4. Location was made for No. 5 Blackbird, SW cor. NW NE, Section 19-6-4. Indian Territory Illuminating Oil Co. made location for No. 1 Weldfelt, NE cor. NW, Section 2-7-4. No. 3 Shellby, SE cor. SW SE, Section 35-8-4, is a location. Location was made for No. 4 Shellby, SW cor. SE, Section 35-8-4. Sinclair Oil & Gas Co. and others moved the rig in for No. 2 Kelley "A," NW cor. NE, Section 2-7-4, St. Louis Pool.

Commerce Development Co. made location for No. 1 Earlsboro Townsite, NW cor. SE NW, Section 8-9-5, on Lot 6, Block 4. Amerada Petroleum Corp. is erecting the rig for No. 1 Smith, SE cor. NE NE, Section 8-8-5. McMan Oil Co. and White Eagle Oil & Refining Co. is building the rig for No. 2 Roberts, NW cor. NE SW, Section 9-8-5. Gypsy Oil Co. made location for No. 2 Gossland, SW cor. NW SW, Section 9-8-5. Shell Petroleum Corp. staked location for No. 2 Jordan, NW cor. SW NW, Section 9-8-5. Sinclair Oil & Gas Co. has the cellar dug for No. 1 Smith, SW cor. NW NW, Section 9-8-5.

G. W. Stogner and others' No. 1 Asher Townsite, C Block 11, NE cor. SE SW, Section 18-6-4, is dry and abandoned at 4,012 feet. Gypsy Oil Co.'s No. 1 Kennedy, NW cor. SW, Section 1-7-4, St. Louis Pool, is dry and abandoned at 3,455 feet in Wilcox sand. Martin & Irwin's No. 1 Kelly, SE cor. NE NE, Section 2-7-4, has been deepened to 4,222 feet and made 700 bbls. Mid-Continent Petroleum Corp.'s No. 1 Decker, SE cor. Section 8-7-4, is producing 175 bbls. from Simpson sand at 4,036-58 feet. Darby Petroleum Co.'s No. 1 Nixon, SW cor. Section 9-7-4, was completed for 125 bbls. in Hunton lime and Viola lime at 3,670-3,948 feet.

Magnolia Petroleum Co.'s No. 1 Richardson, NW cor. SW SW, Section 15-7-4, Pearson-St. Louis Field, is making 90 bbls. from Hunton lime at 3,655-3,900 feet. Independent Oil & Gas Co. and Westland Oil Co.'s No. 2 Rhodd, SW cor. NW NW, Section 16-7-4, made 1,383 bbls. in Simpson sand at 4,020-61 feet. Gypsy Oil Co.'s No. 2 Green, SW cor. NW SE, Section 17-7-4, has been completed for 660 bbls. in Simpson sand at 4,150-78 feet. Magnolia Petroleum Co.'s No. 1 Jones, SE cor. NE, Section 18-7-4, made 135 bbls. in Hunton lime at 3,780-3.926 feet. No. 1 E. Billington, NE cor. NW NE, Section 22-7-4, has been completed for 5,500,000 feet of gas in sand at 3,660 feet. Empire Oil & Refining Co.'s No. 2 Smith, SE cor. NE, Section 8-8-5, flowed 1,360 bbls. from Hunton lime at 4,042-60 feet.

Seminole County

The Texas Company's No. 1 Lewis, NW cor. SE SE, Section 13-5-7, is an old well preparing to deepen. Highway Refining Co. made location for No. 1 Bryan, NE cor. SE SW, Section 9-6-8. Gypsy Oil Co. made location for No. 1 Brumner, SW cor. NW SE, Section 9-6-8. Empire Oil & Refining Co. made location for No. 4 Coker, SW cor. SE SW, Section 13-7-6, Little River Pool. Pure Oil Co. made location for No. 13 Cotcha, NW cor. SE NE, Section 23-7-6. Gypsy Oil Co. staked location for No. 1 Willie, SW cor. NW NE, Section 24-7-6. Mid-Continent Petroleum Corp. has the rig on the ground for No. 9 Smith, NW cor. SE, Section 5-7-7.

Independent Oil & Gas Co. has the cellar dug for No. 1 Thloco, NW cor. NE SW, Section 9-7-7. The Prairie Oil & Gas Co. made location for No. 1 Smith, NE cor. SW, Section 5-7-7. Superior Oil Corp. made location for No. 1 Jones, NE cor. NW NW, Section 9-7-7. Producers & Refiners Corp. made location for No. 1 Seketeke, NW cor. Section 9-7-7. Carter Oil Co. made location for No. 2 D. Rogers, NW cor. SW SE, Section 2-8-5. The Texas Comany made location for No. 4 Mayhue, NE cor. NW, Section 14-9-6. Carter Oil Co. and others moved the rig in for No. 1 C. Hully, NE cor. SW, Section 15-10-6.

Indian Territory Illuminating Oil Co.'s No. 1 Porter, NE cor. Section 24-6-7, is dry and abandoned at 4,300 feet. The Texas Company's No. 7 Janey, SE cor. NE SW, Section 11-7-6, Little River Pool, has been shut in for 50,000,000 feet of gas in Gilcrease sand at 3,157-59 feet. The Prairie Oil & Gas Co.'s No.

2 Townsend, CNL NE SW, Section 6-8-6, Mission Pool, has been completed for 1,010 bbls. in Wilcox sand at 4,509-15 feet. No. 10 Billington, NE cor. SW NW, Section 11-8-5, Carr City Pool, is dry and abandoned at 4,047 feet, after plugging back from Wilcox sand at 4,289 feet. Barnsdall Oil Co.'s No. 3 Cotcha, SW cor. NW NE, Section 23-7-6, Little River Pool, has been completed for 600 bbls. in Gilcrease sand at 3,140-79 feet.

Carter Oil Co.'s No. 2 Walker, SW cor. NE NW, Section 24-7-6, Little River Pool, has been completed for 965 bbls. in Wilcox sand at 4,147-55 feet. No. 3 B. Larney, NE cor. SW NW, Section 26-7-6, made 185 bbls. from Cromwell sand at 3,155-69 feet. Gypsy Oil Co.'s No. 1 Cozad, SW cor. Section 27-7-6, is dry and abandoned at 4,388 feet in Wilcox sand. Carter Oil Co.'s No. 2 C. Coker, SW cor. SE SW, Section 2-8-5, made 1,765 bbls. from Wilcox sand at 4,224-32 feet. Empire Oil & Refining Co.'s No. 14 Cluck, NE cor. SE, Section 11-8-5, has been completed for 494 bbls. in Wilcox sand at 4,195-4,204 feet.

Skelly Oil Co. and the Prairie Oil & Gas Co. and T. B. Slick's No. 1 Varnum, NW cor. Section 5-9-6, had Wilcox sand at 4,312-37 feet and made 512 bbls. Superior Oil Corp. and Gypsy Oil Co.'s No. 1 Thomas, SE cor. NE, Section 11-9-6, is dry and abandoned at 4,429 feet. Carter Oil Co. and others' No. 1 Community-Sanford, NW cor. SE, Section 16-9-6, drilled to 4,315 feet in Wilcox sand and plugged back to 3,539 feet where it made 275 bbls. Magnolia Petroleum Co.'s No. 2 D. W. Anderson, NW cor. SE, Section 18-9-6, made 4,800 bbls. in Wilcox sand at 4,253-4,262 feet.

Beckham County

Fred Googan's No. 1-A Holmberg, SW cor. NE, Section 35-9-25w, has been abandoned at 2,812 feet.

Cotton County

Barnsdall Oil Co.'s No. 5 Lawler, NW cor. SW NW SE. Section 33-1s-10w, is rigging up. Stewart & Wiley's No. 1 Watkins, NW cor. NE, Section 14-2s-11w, is dry and abandoned at 2,013 feet. C. A. Everts' No. 1 McAlester, NW cor. NE, Section 14-2s-10w, has been abandoned at 2,290 feet.

Kiowa County

Alexander and others' No. 1 Ditmar, SE cor. SW SW SE, Section 18-6-16w, has been abandoned at 510 feet. No. 2 Ditmar, NE cor. SW SE, Section 18-6-16w, is dry and abandoned at 510 feet. Cooper & Terhune's No. 2 Ditmar, SE cor. NE NW NE, Section 19-6-16w, has been abandoned at 510 feet.

Stephens County

Fisher & Bullard's No. 1 Johnson, SW cor. SE NW, Section 17-1-8w, is cementing surface pipe. American Pipe Line Co.'s No. 9 Nigh, SW cor. SE NW, Section 34-1s-8w, is cementing 6-inch at 1,717 feet. Pace and others' No. 2 Watkins, NE cor. SW SE, Section 21-2s-7w, is rigging up.

Magnolia Petroleum Co.'s No. 1 Oshter, NE cor. SE, Section 9-1-5w, is dry and abandoned at 5,465 feet. Pace and others' No. 1 Bunch, SE cor. SW NW SE, Section 21-2s-7w, is pumping 55 bbls. from sand at 1,728-32 feet.

Tillman County

Allen Brothers' No. 1 Howell, NW cor. SE, Section 13-1-17w, has been abandoned at 835 feet.

Muskogee County

Mazda Oil Co. moved a machine to the location for No. 3 C. Jackson, CNL SE NW, Section 8-13-16. R. & R. Drilling Co.'s No. 1-A R. Brown, SE cor. Section 18-13-16, is an old well cleaning out to deepen from 1,116 feet. E. Mills and others' No. 1 B. Kelly, C NW NW, Section 24-13-18. M. S. Mussellem has a machine on the location for No. 5 Brook, SW cor. NW, Section 3-13-19. Bryan Petroleum Co.'s No. 9 Barnett, NW cor. SW NE NE, Section 8-15-15, is drilling at 100 feet.

R. & R. Drilling Co.'s No. 1 S. London, SW cor. Section 17-13-16, has been completed for 250,000 feet of gas in sand at 1,005-17 feet. M. S. Mussellem's No. 4 Brook, SW cor. NW SE NE, Section 4-13-19, made a 20-bbl. well in sand at 1,350-70 feet. E. B. George and others' No. 1 F. Caesar, CWL SW SW, Section 33-14-16, is dry and abandoned at 1,865 feet. Babcock Brothers' No. 1 N. Barnett, SE cor. SW NE, Section 8-15-15, is a 12-bbl. well in sand at 1,616-24 feet. Mack Drilling Co.'s No. 1-A J. Friday, SE cor. NE NW, Section 8-15-15, has been completed for 15 bbls. in Wilcox sand at 1,651-70 feet.

Troutt Drilling Co.'s No. 1 J. Friday, NE cor. SE NW, Section 8-15-15, made 15 bbls. in Wilcox sand at 1,652-63 feet. E. Price & Summers' No. 2-A J. Heward, SW cor. NW NW NW, Section 29-15-16, has been completed for 30 bbls. in sand at 1,208-16 feet. R. B. Rose's No. 11 A. Howard, NE cor. SE NE NE, Section 30-15-16, made 8 bbls. in sand at 1,207-25 feet. J. Aggas' No. 1-A Hawkins, CWL NW SE, Section 28-16-15, has been completed for 3,250,000 feet of gas in sand at 1,492-1,503 feet.

Pittsburg County

Empire Oil & Refining Co. has the rig on the ground for No. 1 Williams, C NE SW, Section 33-7-16.

Wagoner County

Omega Oil Co.'s No. 2 Weldon, SE cor. NE, Section 35-17-17, is drilling at 100 feet. J. A. Scherer's No. 1 Posey, NW cor. SW NE, Section 5-17-18, is rigging up. F. Loesing's No. 2 Mantooth, NW cor. SW NE, Section 16-18-16, has been abandoned at 679 feet. Western Drilling Co. and Equipment Co.'s No. 1 Drake, SE cor. NE NE SW, Section 34-18-17, is a dry hole at 860 feet.

Production of Seminole Area

Production of pools in the Seminole area by companies and leases for August 9 follows:

Little River Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Hotulke	22-7-6	1	1
Nitey	2-7-6	3	299
Amerada-Wilcox:			
Fore	35-8-6	2	641
Barnsdall:			
Cotcha	23-7-6	2	1,143
Hotulke	22-7-6	3	869
Walker	4-7-6	1	16
Blackwell	11-7-6	4	980
Baker	11-7-6	4	980
Nitey	35-8-6	5	225
Talley	14-7-6	4	924
Bryan & Emery:			
Walker	4-7-6	1	13
Carter:			
Cotcha, M.	23-7-6	3	68
Cudjo, L.	23-7-6	2	476
Fish	36-8-6	4	516
Harjo, C.	11-7-6	3	2,357
Harjo, M.	13-7-6	4	516
Jackson	11-7-6	4	641
Larney, B.	26-7-6	2	485
Larney, J.	24-7-6	4	1,676
Lena	10-7-6	1	455
Moore	11-7-6	2	64
Tewee	14-7-6	6	896
Thomas	11-7-6	1	363
Walker, J.	24-7-6	1	951
Wilson	12-7-6	1	191
Champlin:			
Tewee	14-7-6	2	853
Continental:			
Cosar	36-8-6	7	672
Cosar, M.	25-8-6	1	313
Continental & Fisher:			
Milsey	11-7-6	2	286
Continental & Shaffer:			
Harrison	4-7-7	1	191
Empire:			
Charty	24-7-6	1	68
Coker	13-7-6	2	520
Cotcha	27-7-6	2	35
Sandlin	3-7-6	1	10
Gypsy:			
Brown, C.	33-8-6	2	802
Brown, M.	33-8-6	1	116
Campbell	33-7-6	2	8
Conard	22-7-6	2	251
Cosar, W.	36-8-6	2	196
Cotcha	23-7-6	12	3,568
Denmark	11-7-6	3	1,086
Hulhoke	14-7-6	10	1,038
Mungee	1-7-6	1	Off
Payne	5-7-7	3	2,022
Pottie	35-8-6	4	167
Renton	11-7-6	3	150
Independent:			
Carpenter	27-7-6	3	525
Davis, R.	13-7-6	4	1,140
Reed	26-7-6	1	18
Tewee	14-7-6	6	1,145
Williams	15-7-6	1	507
Independent & Highway:			
Harris	23-7-6	9	1,928
Independent & White Eagle:			
Davis	2-7-6	4	468
I. T. I. O.:			
Campbell	1-7-6	1	204
Dungan	35-8-6	3	327
House, M. A.	1-7-6	1	26
House, W. E.	1-7-6	1	13
House, "B"	2-7-6	4	593
Hull	26-8-6	3	331
Jackson	1-7-6	3	107
McCulla	1-7-6	3	598
Nitey	2-7-6	5	103
Phoebe "A"	36-8-6	2	21
Phoebe "B"	36-8-6	3	11
Reed	1-7-6	1	Off
Sokethecho	1-7-6	3	182
Magnolia:			
Cruse	2-7-6	4	107
Denby	11-7-6	4	175
Harjo, A.	14-7-6	2	60
Harjo, B.	14-7-6	2	180
Pottie	35-8-6	4	45
Reed, E.	31-8-7	1	28
Reed, I.	22-7-6	3	183
McCulloch & Sands:			
Harrison	4-7-6	1	Off
Mid-Continent:			
Brunner	11-7-6	4	120
Eleck	23-7-6	1	24
Smith	5-7-7	9	13,995
Wadsworth	36-8-6	4	105
W. B. Pine:			
Hoyecha	26-8-6	7	1,977
Pine-Phillips:			
Pottie	35-8-6	1	74
Prairie:			
Chilcoat	25-8-6	3	561
Coker	1-7-6	2	609
Gibson	14-7-6	5	1,061
Harris	14-7-6	4	702
House	2-7-6	4	122
Johnson	24-7-6	2	...
Lustey	5-7-7	2	562
Moppin	24-7-6	2	111
Reed	13-7-6	2	764
Talley	14-7-6	4	562
Thomas	5-7-7	1	130
Williams	15-7-6	2	111
Wood	26-7-6	3	325
Carr	9-7-7	1	626
Prairie & Amerada:			
Sunny	14-7-6	5	850
Slick:			
Cudjo	26-7-6	4	739
Pure:			
Brinson	24-7-6	3	1,171
Cotcha	14-7-6	10	1,971
Harjo	11-7-6	4	826
Hollins	11-7-6	1	398
Reiter-Foster:			
Bunyard	14-7-6	4	511
Jefferson	31-7-6	1	12
McCann	33-7-6	1	44
Shaeffer:			
Narcombe	36-8-6	2	59
Shell:			
Caesar	11-7-6	1	107
Glass	26-7-6	1	Off
Hotulke	23-7-6	4	571
Johnson	13-7-6	4	1,296
Sinclair:			
Blanton	11-7-6	1	251
Cosar	30-8-6	3	880
Haney	12-7-6	1	70
Phillips	5-7-7	1	1,570
Tewee	14-7-6	2	1,461
Sinclair & Kingwood:			
Pompey	24-7-6	1	176
Skelly:			
Carl	14-7-6	2	1,570
Snowden-McSweeney:			
Tiger	13-7-6	2	Off
Superior:			
Potulka	31-8-6	1	2
Texas:			
Brooks	25-8-6	1	9
Coker	1-7-6	3	3
Janey	11-7-6	6	1,065
Texas & Independent:			
Hutulke	23-7-6	5	1,231
Hutulke	22-7-6	3	585
Tidal:			
House	1-7-6	1	353
Johnson	1-7-6	1	21
Twin State:			
Lowe	25-8-6	1	52
Total		355	77,395

Earlsboro Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Anderson	15-9-5	2	230
Cowden	4-9-5	7	866
Rogers	3-9-5	2	84
Atlantic & Sinclair:			
Foreman	18-9-5	1	110
Barnsdall:			
Brown	10-9-5	3	953
Bruner, F.	2-9-5	2	127
Bruner, N.	10-9-5	1	234
Cudjo	14-9-5	1	24
Davis, D.	11-9-5	3	147
Davis, J.	11-9-5	4	1,049
Davis, M.	11-9-5	2	25
Gibson	9-9-5	7	776
Hern	15-9-5	1	Off
Ingram	1-9-5	6	283
Pack, S.	10-9-5	4	75
Peter	10-9-5	3	58
Sango	1-9-5	2	1,431
Sebalka	15-9-5	1	152
Sullivan, H.	11-9-5	1	3
Sull-Harjo	10-9-5	2	17
Wasutke	12-9-5	3	395
Burke-Greis:			
Wisner	6-9-6	2	195
Burke-Greis & Red Bank:			
Mays	1-9-5	3	1,444
Carter:			
Davis	13-9-5	3	15
James	6-9-6	3	1,708
Carter et al:			
Gilliam	13-9-5	2	1,334
Continental:			
Kays	2-9-5	1	28
Spencer	12-9-5	4	630
Cosden, J. S., Inc.:			
Anderson	13-9-5	1	2,380
Sarber	13-9-5	1	123
Empire:			
Barker	12-9-5	1	13
Edmondson	3-9-5	2	28
Empire & Marland:			
Anderson	13-9-5	2	408
Empire & Amerada:			
Bullock	8-9-5	2	902
Gypsy:			
Bruner	10-9-5	4	1,312
Carter, B.	11-9-5	7	1,677
Earl	16-9-5	1	12
Hunick	5-9-5	2	1,485
Lottie	31-10-6	1	Off
Noble	12-9-5	4	821
Payne	18-9-6	1	4,337
Peter	10-9-5	1	82
Sango	1-9-5	13	1,977
State	16-9-5	3	179
Independent:			
Bruner	10-9-5	3	185
Sullivan	10-9-5	1	13
Knapp	8-9-5	2	1,136
Indep.-Margay:			
Gains	11-9-5	2	145
Magnolia:			
Anderson, A.	18-9-6	4	14,196
Anderson, A. W.	18-9-6	2	6,244
Bryant	9-9-5	6	25
Cowden	4-9-5	1	19
Dixon	12-9-5	1	14
Edmondson	3-9-5	1	4
Germany	30-9-5	1	9
Gilliam	13-9-5	3	2,168
Holmsley	11-9-5	6	6
Hyde	13-9-5	2	Off
Ingram	10-9-5	1	18
Lena	10-9-5	3	36
Moore	24-9-5	1	817
Seay	12-9-5	9	138
Simpson	10-9-5	4	211
Sparks	11-9-5	6	103
Sullivan	12-9-5	3	40
Mid-Continent:			
McCumber	9-9-5	4	41
Rogers	5-9-5	4	3,181
Mid-Kansas:			
Anderson	14-9-5	1	35
Phillips:			
Dunaway	14-9-5	1	20
Reede	8-9-5	1	492
Prairie:			
Baker	24-9-5	4	787
Davis	13-9-5	3	404
Graham, C.	3-9-5	1	6
Graham, O.	10-9-5	4	841
James	6-9-6	2	Off
Raitman	18-9-6	1	3,236
Stidham	11-9-5	9	644
Prairie & Skelly:			
Campbell	6-9-6	7	2,860
Prairie & Whitney:			
Harjo	24-8-5	1	6
Shaffer:			
Clark	1-9-5	2	103
Shell:			
Bayless	17-9-5	1	10
Hearn	13-9-5	1	62
Spencer	12-9-5	2	1,499
Sinclair:			
Alexander	36-10-5	1	706
Foreman	18-9-5	1	15
Hollins	12-9-5	1	9
Miller	24-9-5	1	801
Sango	2-9-5	4	1,448
Skelly:			
Mays	1-9-5	4	588
Shepard	6-9-6	4	1,571
Spencer	12-9-5	1	134
Skelly & Atlantic:			
Cherry	6-9-6	4	354
Lottie	6-9-6	4	1,033
Varmun	5-9-6	1	501
Superior:			
Ingram	1-9-5	2	1,157
Walker	3-9-5	2	1,172
Texas:			
Anderson	2-9-5	5	96
Brown	10-9-5	5	93
James	6-9-6	2	194
Rogers	5-9-5	5	931
Wilmott	10-9-5	6	49
Tidal:			
Walker	35-10-5	2	1,475
Watkins	9-9-5	7	1,903
Twin States:			
Barker	12-9-5	3	39
Hern	3-9-5	2	53
Total		307	82,204

Carr City Pool

Company, farm—	Location	Wells	Prod.
Barnsdall:			
Coker	11-8-5	9	1,834
Fife	14-8-5	2	182
Tully	10-8-5	1	112
Carter:			
Coker	2-8-5	2	2,431
Rogers	2-8-5	1	30
Empire:			
Cluck	11-8-5	12	4,471
Gypsy:			
Coker	10-8-5	1	23
C. Coker	2-8-5	1	1,098
Fife	14-8-5	1	15
I. T. I. O.:			
Simpson	10-8-5	1	Off
Tully	10-8-5	1	7
Magnolia:			
"Fee"	11-8-5	3	730
Killing	14-8-5	1	6
Prairie:			
Billington	11-8-5	10	1,865
Mitchell	15-8-5	1	86
Sinclair:			
Bean	11-8-5	3	343
Harjo	11-8-5	3	614
Total		53	13,841

Maud Pool

Company, farm—	Location	Wells	Prod.
Amerada:			
Ballard	1-8-4	1	70
Fehlig	7-8-5	1	46
Gossland	8-8-5	3	163
Gravel	1-8-4	1	15
Hallum	1-8-4	4	1,761
Amerada & Barnsdall:			
Wallace	17-8-5	2	447
Amerada & Hull:			
Green	20-8-5	3	144
Continental & Shell:			
Everetts	18-8-5	2	53
Darby:			
Ketcham	19-8-5	1	2
Empire:			
Smith	8-8-5	1	1,936
Gypsy:			
Bourassa	7-8-5	4	72
Garland	7-8-5	1	1,648
Miller	18-8-5	8	723
Independent:			
Harding	18-8-5	5	210
I. T. I. O.:			
State	16-8-5	1	97
Laurel O. & G.:			
Billington	18-8-5	3	209
Magnolia:			
Billington	8-8-5	4	74

Company, farm—	Location	Wells	Prod.
Green	20-8-5	3	233
Mid-Continent:			
Shelton	18-8-5	1	46
Phillips:			
Hudson	19-8-5	4	195
Wallace	17-8-5	2	110
Pine:			
Lingefelt	18-8-5	2	44
Smith	8-8-5	1	287
Prairie:			
Campbell	18-8-5	8	148
Prairie & White Eagle:			
Villines	20-8-5	1	11
Pure:			
Lindly	18-8-5	8	377
Urbansky	19-8-5	2	65
Wiley	8-8-5	4	1,150
Sinclair:			
Bellars	19-8-5	10	606
Calvin	7-8-5	3	231
Lewis	6-8-5	2	70
Skelly & Lenox:			
Green	20-8-5	1	173
Skelly & Margay:			
Lingefelt	18-8-5	4	168
Texas:			
Calvin	7-8-5	8	248
Tidal:			
Dunn	12-8-4	1	45
Everett	18-8-5	2	70
Smith	8-8-5	1	108
Twin State:			
Calvin	7-8-5	2	125
Wilcox:			
Smith	8-8-5	4	1,542
Total		125	13,740

Mission Pool

Amerada:			
Rice	5-8-6	2	937
Carter:			
Fuswa	18-8-6	4	666
Melisse	9-8-6	1	536
Micco	8-8-6	2	572
Continental:			
Maring	7-8-6	4	976
Darby:			
Judy	1-8-5	1	55
Gypsy:			
Baby	6-8-6	1	15
Barkus, N.	6-8-6	10	5,127
Barkus, S.	7-8-6	1	104
Dosar	7-8-6	5	122
Hardy	7-8-6	7	346
Harjoche	7-8-6	4	104
Micco, L.	8-8-6	2	41
Micco, S.	8-8-6	1	10
Mission 5 and	6-8-6	7	1,780
Mosar	1-8-5	4	979
Independent:			
Lawson	1-8-5	5	1,394
Independent & Kistler:			
Payne	7-8-6	4	1,213
McMahon et al:			
Harjo	7-8-6	2	770
Mid-Continent:			
Ripley	13-8-5	1	141
Mid-Kansas:			
Moore	7-8-6	1	Off
Minnehoma:			
Neal	7-8-6	4	582
Pine:			
Harjo	6-8-6	2	660
Micco	8-8-6	1	25
Prairie:			
Crain	7-8-6	1	198
Melton	6-8-6	3	1,222
Micco	5-8-6	1	8
Townsend	6-8-6	1	1,072
Prairie & Slick:			
Nelly	12-8-5	1	27
Prairie & Gypsy:			
Owens	18-8-6	1	421
Shaffer:			
Weaver	12-8-5	3	1,183
Shell & Continental:			
Herndon	7-8-6	3	1,112
Shell & Papoose:			
Maines	7-8-6	8	1,287
Sinclair:			
Hardy	7-8-6	4	981
Sinclair & Lenox:			
Judy	1-8-5	1	58
Tidal:			
Nelly	12-8-5	5	1,907
Twin State:			
Hayes	8-8-6	2	1,356
Judy	6-8-6	2	866
Ripley	12-8-5	2	198
Total		116	30,151

Bowlegs Pool

Amerada:			
Roscoe	15-8-6	6	733
Atlantic:			
Baker	10-8-6	4	233
Fleet	23-8-6	3	43
Grayson	13-8-6	4	328
Jones, A.	16-8-6	2	12
Jones, C.	9-8-6	1	33
Barnsdall:			
McNac	28-8-6	1	13
Murrow	11-8-6	4	297
Carter Oil:			
Bowlegs	15-8-6	4	364
Burden	23-8-6	2	231
Harjoche	14-8-6	6	427
Hilly	23-8-6	3	241
Jones	11-8-6	4	443
Walker	15-8-6	4	379
Wise	23-8-6	11	1,041
Dixie:			
Culley	11-8-6	1	37
Empire:			
Lacy	14-8-6	6	264
Wise	23-8-6	2	153
Gypsy:			
Bowlegs	22-8-6	1	3
Cumsey	10-8-6	4	540
Grayson	13-8-6	4	344
Harjoche	10-8-6	3	290
Jones	11-8-6	1	68
Walker	15-8-6	7	974
Wise	23-8-6	2	115
I. T. I. O.:			
Barnett	24-8-6	2	87
Barnett "B"	23-8-6	1	30
Billington	22-8-6	3	325
Bowlegs	22-8-6	9	1,381
Davis	13-8-6	4	87
Fay	13-8-6	9	921
Goforth	15-8-6	12	1,409
Livingston	15-8-6	10	1,321
Lizzie	13-8-6	3	281
Walker	15-8-6	8	1,201
Williams	12-8-6	1	209
Wilmott	15-8-6	4	439
Work	24-8-6	1	54
Youngblood	24-8-6	2	46
Magnolia:			
Davis	13-8-6	3	331
Davis, M.	13-8-6	1	35
Hammond	10-8-6	8	567
Rhodes	12-8-6	5	401
Van Buskirk	9-8-6	4	370
McCulloch:			
Bowlegs	22-8-6	2	82
Mid-Continent:			
Baker	10-8-6	4	152
Smith	12-8-6	6	565
Minnehoma:			
Bowlegs	15-8-6	3	61
Prairie:			
Gahagan	23-8-6	3	243
Harber	10-8-6	8	1,444
Jones, N.	3-8-6	1	190
Jones, G.	11-8-6	3	156
Templeton	12-8-6	4	1,886
Whitney	23-8-6	4	350
Pure Oil:			
Reed	14-8-6	14	2,344
Strother "D"...11 and	14-8-6	4	380
Strother "F"	10-8-6	7	2,086
Shaffer:			
Lacy	14-8-6	3	437
Sheil:			
Taylor	16-8-6	5	35
Sinclair:			
Cumsey	10-8-6	4	866
Ellen	11-8-6	5	643
Harjo	14-8-6	3	765
Jones	9-8-6	7	255
Taylor	10-8-6	4	654
Taylor, W.	10-8-6	3	506
Walker	22-8-6	4	694
Texas:			
Reed	14-8-6	11	623
Tidal:			
Grayson	13-8-6	4	431
Harjoche	10-8-6	6	885
Total		300	34,194

Seminole Pool

Amerada:			
Fixico	23-9-6	2	95
Killingsworth	23-9-6	4	529
Rentie	23-9-6	3	273
Atlantic:			
Cudjo, N.	35-9-6	3	381
Barnsdall:			
Carter	24-9-6	6	246
Henry	14-9-6	2	449
Jones	34-9-6	4	495
Carter Oil:			
B. Carter	24-9-6	2	40
F. Carter	23-9-6	3	87
Creamer	34-9-6	1	1
Cudjo, R.	35-9-6	4	182
Cudjo, W.	34-9-6	1	131
Gilliland	27-9-6	1	116
Grisso	23-9-6	4	228
Grisso, M.	15-9-6	1	199
Killings, G. F.	14-9-6	4	41
Killings, M. E.	23-9-6	12	4,384
Knapp	13-9-6	1	28
Lukes	27-9-6	5	1,116
Pounder	34-9-6	2	149
Simpson	35-9-6	2	117
Strothers	34-9-6	4	366
Vierson	23-9-6	1	15
Sanford	16-9-6	1	228
Empire:			
Gross	25-9-6	1	45
Wilson	34-9-6	2	240
Gypsy:			
Butler	35-9-6	4	816
Carter	24-9-6	8	854
Cudjo	34-9-6	4	364
Fixico	26-9-6	7	57
Harjo	25-9-6	3	235
Wolfe	26-9-6	5	312
Independent:			
Fixico, P.	23-9-6	3	448
Harjo	25-9-6	2	36
Butler	35-9-6	3	613
Fixico, T.	26-9-6	5	230
Jones	26-9-6	4	393
I. T. I. O.:			
Allen	25-9-6	2	41
Bowlegs	26-9-6	12	1,980
Goodin	23-9-6	4	267
Harjo	23-9-6	3	37
James	24-9-6	2	66
Reed	24-9-6	1	8
Kingwood:			
Johnson	22-9-6	3	402
Magnolia:			
Boren	2-8-6	1	4
Franks	25-9-6	3	192
Mid-Continent:			
Rentie	14-9-6	9	470
Tayeche	24-9-6	7	139
Phillips:			
Strothers	27-9-6	2	84
Prairie:			
Cudjo	35-9-6	3	551
Franks	35-9-6	6	854
Giblet	35-9-6	3	1,294
Gross	25-9-6	5	38
Mason	36-9-6	1	38
Spencer	13-9-6	1	6
Strothers	27-9-6	8	1,772
Tiger	1-8-6	1	35
Pure Oil:			
Strothers	26-9-6	17	4,003
Strothers, B.	36-9-6	4	928
Strothers, C.	34-9-6	1	350
Shell:			
Harber	22-9-6	1	192
Lasley	22-9-6	2	33
Sinclair:			
Carter	13-9-6	2	22
Cudjo "A"	35-9-6	6	639
Cudjo "B"	35-9-6	4	732
Dicey	22-9-6	2	441
Fixico	23-9-6	4	472
Superior:			
Cudjo	35-9-6	4	114
Noble	15-9-6	1	1
Texas:			
Mayhue	14-9-6	1	24
Strothers	2-9-6	1	26
Tidal:			
Carter	24-9-6	4	67
Fixico	26-9-6	7	1,442
Harjo	25-9-6	1	23
Harjo, T.	23-9-6	3	46
Turman:			
Cudjo	35-9-6	4	598
Grisso	35-9-6	1	4
Jones	34-9-6	4	1,156
Total		273	34,180

East Seminole Pool

Barnsdall:			
Ke-pa-ya	7-9-7	1	20
Continental:			
Boenig	17-9-7	1	47
Johnson	18-9-7	1	1,394
Perry	18-9-7	2	606
Devonian:			
Harjo	18-9-7	1	13
Gypsy:			
Harjo	18-9-7	1	179
Magnolia:			
Drewery	18-9-7	2	10
Prairie:			
Stubbs	18-9-7	2	154
Shaffer:			
Hangler	19-9-7	1	15
Sinclair:			
Bob Coody	18-9-7	1	1,439
D. Coody	17-9-7	1	181
Johnson, B.	18-9-7	1	Off
Thompson, B.	18-9-7	1	949
Warrior, J.	17-8-7	1	38
Warrior, S.	17-9-7	1	65
Total		18	5,110

Searight Pool

Amerada:			
Johnson	4- 9-6	1	29
Nicey	3- 9-6	1	23
Strothers	3- 9-6	2	264
Barnsdall:			
Jackson	5- 9-6	2	24
Burk-Greis:			
Varnum	32-10-6	1	33
Carter:			
Davis	4- 9-6	3	184
I. T. I. O.	11- 9-6	1	355
Frazier	3- 9-6	5	734
Mayhue	11- 9-6	1	385
Kiker	2- 9-6	1	11
Skiff	10- 9-6	1	96
Mandler	3- 9-6	2	5
Slick	11- 9-6	2	1,141
Scott	26-10-6	1	11
Steward	10- 9-6	1	351
Carter et al:			
Strothers	11- 9-6	2	1,356
Gypsy:			
Cudjo	4- 9-6	3	546
Nevins	32-10-6	2	249
Magnolia:			
Varnum	32-10-6	2	569
W. F. Varnum	5-9-6	1	47
Mid-Continent:			
Grayson	24-10-6	4	24
Saloche	33-10-6	6	406
Mid-Continent & Homaokla:			
Nevins	32-10-6	4	1,115
Papoose:			
Marks	32-10-6	1	445
Pine:			
Lula	4- 9-6	1	14
Prairie:			
Cannon	32-10-6	1	2
J. Carter	10- 9-6	1	3
Houch	33-10-6	1	3
Hurford	33-10-6	1	Off
Kincaid	33-10-6	2	60
Wimer	22-10-6	1	15
Pure:			
Aldridge	3- 9-6	4	726
Shell:			
Strothers	3- 9-6	4	214
Crump	32-10-6	1	Off
Sinclair:			
Polly	3- 9-6	4	1,301
Superior:			
Varnum	4- 9-6	1	29
Texas:			
Fleet	4- 9-6	1	17
Twin States:			
Varnum	4- 9-6	2	125
Wilcox:			
Chupco	4- 9-6	7	253
Total		82	11,163

Production of St. Louis Pool

Production of St. Louis Pool by companies and leases for August 9, follows:

St. Louis Pool

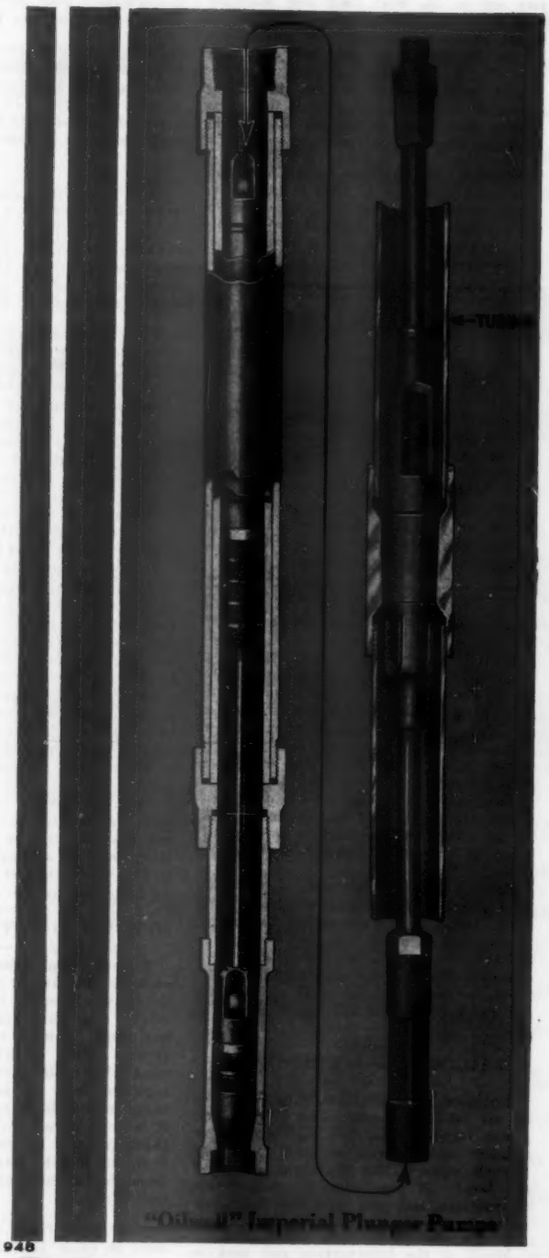
Company, farm—	S-T-R	Wells	Prod.
Amerada:			
Richardson	16-7-4	1	28
Atlantic-Independent:			
Burke	16-7-4	1	491
Mildrum	15-7-4	1	199
Barnsdall:			
Stahl	30-7-5	3	733
Darby:			
Standrigde	10-7-4	1	85
Blackwell-Omar:			
Cherry	25-7-4	3	598
Lewis	24-7-4	2	132
Carter:			
Akin	2-7-4	1	15
Darby:			
Nixon	9-7-4	2	166
Youngblood	16-7-4	2	896
Empire:			
Bettis	17-7-4	1	342
Seale	36-7-4	1	152
Gypsy:			
Bruno	25-7-4	4	82
Collins	25-7-4	4	579
Dodson	26-7-4	4	130
Green	17-7-4	2	850
LeClair	23-7-4	4	1,793
Roseman	26-7-4	4	409
Stahl	30-7-5	8	514
Home Gas:			
Town Lot	14-7-4	1	278
Houston:			
Wyatt	17-7-4	2	442
Independent:			
Borrow	1-7-4	2	829
Blandin	30-7-5	5	713
Youts	19-7-5	8	6,176
Independent-Darby:			
Pappen	16-7-4	1	894
Independent-Skelly:			
James	17-7-4	1	1,033
Boage	17-7-4	1	21
Independent-Westland:			
Rhodd	16-7-4	4	2,123
Inter-Ocean:			
McGee	23-7-4	6	277
I. T. I. O.:			
Shobe	35-8-4	1	226
McGee	26-7-4	1	162
Irwin & Martin:			
Kelly	2-7-4	3	1,325
Magnolia:			
Banta	14-7-4	3	304
Brandenburg	18-7-5	5	1,397
Caudle	13-7-4	1	64
Cherry-A	26-7-4	5	549
Cherry-B	26-7-4	3	213
G. W. Fyke-A	20-7-5	1	405
G. W. Fyke-B	20-7-5	2	459
Tull Byke-B	20-7-5	2	561
Rull Fyke-D	20-7-5	2	280
Hembree	19-7-5	4	358
Jones	18-7-4	1	76
Latimer	17-7-4	3	357
Richardson	15-7-4	1	76
J. M. Robbins	15-7-4	4	215
Pearl Robbins	15-7-4	1	64
Mary Wilborn	24-7-4	2	528
S. A. Wilborn	24-7-4	5	794
Chas. Youts	20-7-5	5	420
C. A. Youts	19-7-5	4	510
H. E. Youts	20-7-5	7	3,183
Magnolia-Pierce:			
Hubanks	17-7-4	2	935
McCullough-Blackwell:			
Bruno	25-7-4	5	837
McCullough-Mid-Continent:			
Smith	25-7-4	6	856
Mid-Continent:			
Pecker	8-7-4	1	154
Mid-Kansas:			
Getzleman	25-7-4	4	940
Mid-Continent:			
Robbins	25-7-4	1	36
Mid-Kansas:			
Lunay	30-7-5	3	363
Minnehoma:			
Simms	16-7-4	1	369
Packard:			
Church	29-7-5	1	486
Phillips:			
Cherry	25-7-4	2	142
Grace	2-7-4	1	93
Stahl	30-7-5	4	709
Prairie:			
Desmond	25-7-4	4	105
Ellison	25-7-4	4	393
Gammon	30-7-5	8	2,782
Hembree	19-7-5	4	1,922
Linn	30-7-5	4	655
Wolfe	29-7-5	4	2,610
Youts	19-7-5	4	229
Prairie et al:			
Davis	18-7-5	4	88
Prairie-Maud:			
Nesbit	18-7-5	2	247
Prairie-Shaffer:			
Cummings	17-7-4	1	959
Rice	17-7-4	1	329
Reagan	17-7-4	1	329
Pure:			
Dodson	26-7-4	2	125
Thomas	26-7-4	4	5,665
Tolen	1-7-4	1	163
Shaffer:			
Cherry	23-7-4	4	148
Tolen	30-7-5	4	450
Sinclair:			
Blandin	24-7-4	13	1,177
Brandenburg	7-7-5	3	941
Bruno	26-7-4	2	1,945
Gilbreath	25-7-4	2	917
Nadash	29-7-5	4	449
Nealy	25-7-4	5	163
Nealy-B	25-7-4	2	639
Nesbit	18-7-5	8	2,093
O'Kitchee	19-7-5	7	390
Sinclair-McGrow:			
Jackson	36-8-4	1	104
Kelly-A	2-7-4	1	1,274
Superior:			
Texas:			
Cherry	25-7-4	4	846
Warner-Quinlan:			
Light	18-7-4	1	0
Westheimer-Daube:			
Fried	24-7-4	5	630
Small Pumpers		110	2,495
Total St. Louis Pool		400	71,637

Asher Pool

Commerce Dev.:			
Townsite	19-6-4	1	7
Independent-Twin State:			
Gardner	19-6-4	1	186
Prairie-Slick:			
Laster	19-6-4	4	2,691
Simms:			
Las.er	19-6-4	3	7,566
Slick:			
Alexandra	19-6-4	1	396
Bledsoe	20-6-4	1	49
Welden	20-6-4	3	334
Slick-Amerada:			
Walker	19-6-4	1	329
Texola:			
Townsite	19-6-4	1	109
Total Asher Pool		16	11,663

(Continued on Page 112)

Designed to meet severe conditions



For more than 20 years "Oilwell" Imperial Plunger Pumps have given satisfactory performance in all fields. Each pump has only two alloy cast iron liners which can be easily replaced on the derrick floor without special tools. The plungers are corrugated, affording a fluid seal which prevents slippage.

Assembled in nine different styles to meet all pumping requirements, in lengths 5-feet 6-inches to 14-feet inclusive. Can be used with 2, 2½, 3 and 4-inch tubing.

LINER BARRELS

"Oilwell" Liner Barrels are ideal pumps for wells of settled production. The Tulsa Style pump is seated by means of three composition rubber seat rings at top of pump. Floating drop in top cage prevents sand from settling back and relieves traveling valve ball from fluid pound. The pump is pulled as a unit. The Bremen style pump is seated on top of working barrel and recommended for wire line pumping. Valves, balls, seats and cups on both style pumps are standard size.

LOAD & SAND CHECK

The "Oilwell" Sand and Load Check, used with Imperial Plunger Pumps, will eliminate your sand troubles on full or part time wells. It relieves the pump of the load, reducing wear on the ball and seat.

WORKING BARRELS

Working Barrels made of either high grade drawn seamless tubing or alloy cast iron. Noted for their "shot-gun" finishes, these barrels are air pressure tested—checked with limit gauges and made in accordance with A. P. I. specifications.

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

GAS-OIL RATIO TOO HIGH

I have a problem in a well located in Section 44, Block 25, Gray County, Texas, which as yet we have been unable to solve.

The well is making 4,000,000 feet of gas, 200 bbls. of salt water and 150 bbls. of oil, paraffin base, 40 gravity. I have used four or five different chemicals without satisfactory results. The final result on this chemical use is that the wax and paraffin carry over and hold about 4 per cent of water. We have had a little luck on rolling it with gas but in doing this we roll away about one-third of the lighter oil and about four or five gravities. I have been unable to find a chemical that will relieve all difficulty.

I have had samples of the oil tested at different laboratories and it seems that some of it will work, but the conditions in the well seem to change, and then it will require a different chemical. In checking a sample at one of the refineries here who made a test, we found that by heating the oil to 250 degrees Fahrenheit, it would make a perfect separation, but I do not want to go into the refining business. I hope you will have some suggestion that will solve my problem, and that I may have an early reply.—M. R. T.

From the information you have furnished it would seem that part of the trouble experienced is caused by the fact that you have too high a gas-oil ratio at this well, and the extra gas is causing the paraffin to congeal through the cooling effect produced by the expansion of this gas as it comes to the surface with the oil.

Treating all fluid, that is salt water and oil, as liquid to be lifted to the surface and taking 4,000,000 feet of gas as the propulsive medium, it is found that the gas-oil ratio is about 11,430 cubic feet of gas per barrel of oil produced.

Under conditions that are efficient the gas-oil ratio should not be over 2,000 cubic feet of gas per barrel of oil, so it would seem that you have about 9,000 cubic feet of gas in excess of that required to lift the oil and water to the surface.

To remedy this condition it is suggested that you use some form of reducer at the bottom of the well to restrict flow, or if this is not easily accomplished a flow bean should be installed at the well head and some effort made to reduce the gas-oil ratio.

If the amount of gas accompanying the oil is reduced it is probable that the amount of cut oil will be reduced, or rather the character of the mixture will be changed so that it will not be difficult to settle out the water and get good pipe line oil.

You do not mention heating of the emulsions in the treating tank, and in handling Panhandle crudes this has been found of advantage, although it would seem that there have been times when the heating has been carried further than actually was needed to separate the oil and water, and some of the lighter ends have been evaporated.

It would hardly seem advisable to agitate the emulsion in the treating tank with gas, for if this gas is under normal well pressures and used in large volumes it would have a cooling effect on the paraffin and would also combine with some of the lighter hydrocarbons in the oil and carry them away and in this way lower the gravity of the pipe line oil.

It is true that agitation of Panhandle crude will make it flow even though the temperature of the oil be such that it will congeal if allowed to stand, but it has been found much more desirable to do this agitating by mechanical means than by the use of gas under pressure.

Among helpful articles on the handling of Panhandle crude oil and paraffins is a paper prepared by C. E. Reistle, Jr., of the Bureau of Mines. No recommendation is made here regarding treating the emulsions for it is believed that the real way to solve your problem is to reduce the amount and character of the emulsion and in this way eliminate the greater part of the trouble you are experiencing.

AS TO "CENTER OF GRAVITY"

In talking about counterbalances for a pumping well an engineer used the term "center of gravity" and I will appreciate it if you will explain to me what he meant?—K. L. A.

In this connection the engineer probably had in mind the point in the mass of the counterweight about which, if suspended, all parts of the weight would be in equilibrium; which means that they would be so balanced that they would not tend to rotate.

Application of the term in this particular instance has to do with the effect of this weight at the end of an arm, or in a weight that is attached to the crank or crank shaft. The center of gravity of the mass indicates the radius of the circle through which the weight is moving and is used to determine the effective force applied in either case.

If further details are desired it is suggested that you refer to some good mechanical hand book, Kent's for instance, for there you will find full description of this law of mechanics as well as instructions about how to determine the center of gravity of various bodies.

HAVING EMULSION TROUBLE

I am having a good deal of troube with cut oil on my property and have been advised to use some of the preparations I see advertised to separate the water from the oil. Perhaps it would pay me to do that, but one operator told me I could do the job with lime at small expense. Would you advise me to use lime? If so, just how should I use it? Will it do the work as thoroughly and cheaply as the advertised preparations? My production is not large and it would not do for me to take on anything very expensive.—S. K. E.

Whether or not lime (calcium oxide) will break down an oil field emulsion depends primarily upon the character of the emulsion. As a rule oil field emulsions are made worse rather than better by lime salts. For this reason lime has never come into extensive use for treating emulsions.

WHY WAS IT CALLED THAT?

BRIMSTONE

Brimstone is a corruption of brennisteinn, or "burning stone" and takes its name from the fact that sulphur has the general appearance of stone but will burn. It first was collected from deposits around volcanoes, where it solidifies as a hard substance, and in this way differs from the sulphur deposits found around hot springs.

In United States Bureau of Mines Bulletin 250, "Oil Field Emulsions," by D. B. Dow, calcium oxide is mentioned as a possible reagent for breaking down emulsions but in speaking of the chemical and physicochemical reactions involved in breaking down the emulsions it is stated: "It should be noted that sodium salts would be more apt to produce this reaction than calcium salts, as the latter usually tend to form emulsions of this type instead of breaking them."

Sodium soaps are most extensively used for breaking down emulsions and have been most generally successful. The use of soaps of this kind is covered by patents. It is suggested that you communicate directly with the manufacturers of reagents for treating cut oils for further information upon the subject.

FAILURES IN SUCKER RODS

Enclosed is a print showing the parts of an oil well sucker rod. Will you please furnish data showing the relative number of failures of the rod, the wrench square, the threaded pin and the box? If you cannot furnish this information, will you please let me know where it can be had?—P. J. M.

Much of the information you seek is contained in an article published in the 1928-1929 volume of Petroleum Development and Technology issued by the American Institute of Mining and Metallurgical Engineers. The article, prepared by M. J. Kirwan and K. A. Covell, is entitled, "Pumping Deep Wells in Seminole Fields."

From one of the larger oil companies was obtained the following record on rod troubles: Breakage in box, 31 per cent; breakage in pin, 24 per cent; breakage in rod, 30 per cent; unscrewed, 15 per cent. These figures cover records kept on about 80 strings of rods for a period of seven months in the Seminole area.

PERCENTAGE OF SALT NEEDED

Can you tell me the relative amount of salt required per gallon of water to make a brine with a specific gravity of 1.1 to 1.2 as suggested for use in cable tool wells when drilling in through formations that may carry gas or oil under heavy pressures?—L. E. W.

Kent's handbook states that Dr. Engelhardt found the following relations existed between the salinometer strength, specific gravity, solid contents, etc., in a report published in United States Mineral Resources in 1888:

Salinometer degrees	Baume degrees	Spec. grav.	Percent of salt	Weight of gal. of brine in lbs.	Pounds of salt in a gal. of brine of 231 cu. in.
40	10.40	1.073	10.600	8.939	0.947
50	13.00	1.093	13.250	9.105	1.206
60	15.60	1.114	15.900	9.280	1.475
70	18.20	1.136	18.550	9.464	1.755
80	20.80	1.158	21.200	9.648	2.045
90	23.40	1.182	23.850	9.847	2.348
100	26.00	1.205	26.500	10.039	2.660

This table would indicate that a saturated solution of salt could contain not more than 2.66 pounds of salt per gallon and it is stated further that the solubility of salt at 229 degrees Fahrenheit is only 2.5 per cent greater than at 32 degrees. Therefore it is not possible to separate the salt from the water by allowing a saturated solution at the boiling-point to cool to a lower temperature with the idea that it will separate out as is the case where a saturated solution of alum is so treated.

It is interesting to note that with the saturated solution the weight of a gallon of brine is about 1.709 pounds greater than it would be for an equal amount of clear water. As a column of water 1 foot high exerts a pressure of .433 pound per square inch a column of this saturated brine the same height would create a pressure of .521 pound per square inch, or expressed in terms of 1,000-foot of column the brine would exert about 88.765 pounds more pressure than the clear water.

This practice of charging water with salt for drilling in has its advantages, but economy can be practiced if care is taken not to attempt to add more salt to the water than it can readily dissolve as indicated by the accompanying table.

MUD FLUID WITH CABLE TOOLS

I have been wondering if mud fluid such as they use in rotary drilling would be of any benefit in cable-tool drilling where you have trouble going through gas sand. I have been having a lot of trouble lately in drilling through a gas sand with cable tools, which are used altogether here. I have never heard of using mud fluid in cable-tool drilling, but it seemed to me it might help. If you think it could be used with good results I would like to have a little detail information about preparing the mud fluid. —G. T. N.

Mud-laden fluid has been extensively used in cable tool drilling to control or kill the flow of gas under conditions such as you describe and also as a means of preventing the flow of gas, oil or water from one formation to another back of the casing. Mud fluid back of casing is one of the best protections known against corrosion of the casing from the outside.

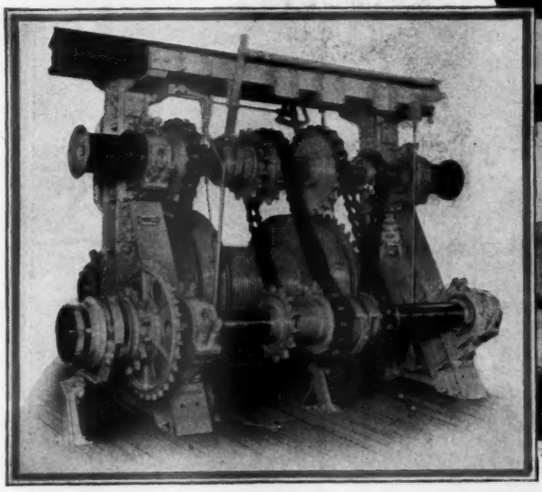
The uses of mud-laden fluid in cable tool drilling and the methods of preparing proper muds for this work have been fully described in United States Bureau of Mines Bulletin 134 "The Use of Mud-Laden Fluid in Oil and Gas Wells" by James O. Lewis and William F. McMurry. The subject is too lengthy and requires the use of too many illustrations to cover adequately in these columns.

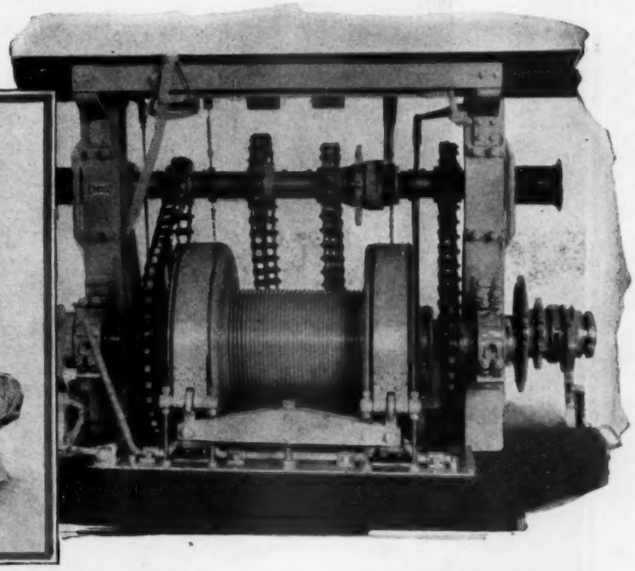
HYATTS...
on all shafts of EMSCO DRAW WORKS

Because drum shaft, line shaft and jack shaft carry the greatest burdens, Hyatt Roller Bearings were selected by Emsco for these important positions.

Hyatts keep shafts in true alignment. Wear and replacements are avoided. Annoying evils of maintenance and attention are minimized.

Type "HH-46" Emsco Draw Works, built by the Emsco Derrick and Equipment Co., Los Angeles and Houston, for use in connection with Hild Automatic Drive... both Hyatt protected.



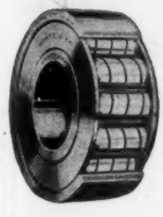


Under heavy loads and the stress of constant starting and stopping, ordinary bearings would soon weaken and break down. The inherent ruggedness of Hyatts, however, withstands these gruelling tasks indefinitely, prolonging equipment life materially as they serve.

Rarely is Hyattized equipment laid up for repairs. Infrequent replenishment of lubricant is all that is necessary to insure years of frictionless, smooth-running performance.

Like Emsco, many other oil well equipment manufacturers are building the Hyattway to safeguard the machinery you buy.

HYATT
ROLLER BEARINGS
PRODUCT OF GENERAL MOTORS



Hyatt Roller Bearing with outer race cut away to show roller construction.

HYATT ROLLER BEARING COMPANY
Newark Detroit Chicago Pittsburgh Oakland

When Fortune Smiles

SUCCESS IS LARGELY A MATTER OF CHOOSING WISELY

TODAY'S executives in the oil and gas industry were yesterday's operators, superintendents, engineers.

Most of these men worked their way up by means of hard work. *All* of them can probably trace their success to one or more incidents where they exercised good judgment. Good judgment is, in everything, a universal foundation of success. In the selection of operating equipment especially, it has been the key to promotion. An important decision such as required in the purchase of power units, often regulates, or determines a man's future.

Like *Sterling* on silver, like *Tiffany* in jewelry—the Cooper nameplate on a gas engine or compressor is a permanent protection—and a lasting record of a choice wisely made.

In 96 years of successful engine building, no Cooper engine or compressor has ever failed to justify the judgment of the man who chose it.

THE COOPER-BESSEMER CORPORATION

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THE C. & G. COOPER CO. MOUNT VERNON, OHIO

THE BESSEMER GAS ENGINE CO. GROVE CITY, PENNSYLVANIA

YOU'RE ALWAYS SAFE IN CHOOSING A COOPER

Natural Gas Developments

GAS FOR MONTERREY READY BY OCTOBER

Gringo natural gas will cook frijoles and tortillas on their native heath for the first time on October 1 when the United Gas Co. pipe line from the Jennings gas field, Zapata County, Texas, to Monterrey, Mexico, is completed and natural gas is turned into the mains of Monterrey which now serve artificial gas to domestic consumers. In addition the line will provide fuel for industrial consumers directly. It will handle about 30,000,000 feet of gas a day at first with a potential capacity twice as great.

This is not the first instance of exporting an American product by pipe line, natural gas having been piped across the border to Canada, near Buffalo, for many years. It is, however, the first time natural gas has been distributed for domestic use in Mexico despite the enormous natural gas production which formerly came from the Mexican oil fields about Tampico, most of which was wasted.

United Gas Co. already has complied with all requirements of Mexican law through its operating subsidiary, Cia Mexicana De Gas S. A. Monterrey, known as the "Pittsburgh of Mexico," has a population of about 100,000. It has large steel industries which will insure an increasing market for American fuel.

MAY ENLARGE CARBON PLANT

Reported construction of additional units by the Palmer Corp. of Louisiana at its Borger, Tex., carbon black plant, 2 miles west of town, will increase the total daily capacity of the dozen plants in the Borger area to over 400,000,000 feet of residue gas per day.

The units will consist of 36 burning houses each. The present units have 32 burning houses and these will be increased to 36, the same size as the new units.

The Palmer Corp. has two plants in Borger, one known as the Borger plant of the Palmer Corp. and the other the Panhandle Carbon Co. The former plant has four large sized units and the latter two. Present capacity of the plants is approximately 54,000,000 feet of residue gas per day. Black produced is approximately 82,000 pounds.

DURANGO DISTRIBUTORS

The Hope Engineering Co. has completed the construction of the city distributing plant in Durango, Colo., and the main line bringing natural gas from the Ute Dome in New Mexico. This property will be operated under the management of the Home Engineering Co. and it will be the first natural gas brought to Durango, center of one of the world's largest silver mining areas. The principal industrial consumer on the new line will be the large Durango plant of the American Smelting & Refining Co.

OKLAHOMA GAS FRANCHISES

One of the most active 30-day periods in the history of Oklahoma in the number of public utility franchise elections held ended July 23. Sixteen franchise elections were held, 10 providing for natural gas service, as follows: Beaver, to Cimarron Utilities Co.; Forgan,. to Cimarron Utilities Co.; Butler, to Consolidated Gas Utilities Co.; Manitou, to Community Natural Gas Co.; Keyes, to Cimarron Utilities Co.; Mountain Park, to Community Natural Gas Co.; Hammon, to Consolidated Gas Utilities Co.; Snyder, to Community Natural Gas Co.; Lamar, to X. X. McKee of Wetumka.

ENORMOUS GAS WASTE IN CALIFORNIA NECESSITATED CONSERVATION LAW

At the end of August the new California law which prohibits an unreasonable waste of natural gas comes into full effect. Full success in the enforcement of this measure, says the Standard Oil Bulletin, published by the Standard Oil Co. of California, is of the greatest consequence to the people of California and to those interested in the California oil industry, in all of its phases, including stockholders of oil companies. Its importance can hardly be overstated.

To the people of California the enormous wastage of gas is the permanent loss of a natural heritage of great value, of inestimable worth in some possible day of the future when California's oil and gas supply approaches exhaustion. To those particularly interested in the oil industry a continuation of the present condition spells advancement toward demoralization and chaos.

The facts are simple. The discovery of new oil fields, highly prolific in both crude oil and natural gas, and their unrestrained development, has brought about a condition of great overproduction of both oil and gas. During June, when 4,345,497 more barrels of crude oil and 19,256,500,000 feet of natural gas were produced than could be used, the oil was sent to costly storage; the gas blew off into the air, gone from human use forever. The accumulation of surplus stocks in storage of petroleum reached a record figure—165,270,000 bbls., a gain of 5,475,590 bbls. for the month.

In the subterranean deposits in which petroleum and natural gas are found sometimes gas alone is encountered, but more often in California the two are in liquid combination in the same reservoir. As a well pierces the reservoirs the oil and gas rise under pressure. At the well mouth the oil and gas separate. The oil is sent to tank farms. Much of the gas is used in the field for fuel, sent to market or, in some cases, put back into the ground. But there remains still enormous quantities for which there is no market nor use. This is the gas which is blown to the air. The cost of storing gas aboveground is prohibitive. Older oil fields from which oil and gas have been removed, leaving voids, afford the only effective storage for gas, and quantities have been disposed of in this manner. This gas also serves the useful purpose of repressuring old fields.

The interest of the public is clear. California's natural gas deposits constitute a great natural resource. Natural gas is a valuable fuel, and its wastage in huge quantities is economically criminal. Southern California has long had the benefit of natural gas for industrial and domestic use. Its availibility is one of the important factors in the rapid development of that region. Recent discoveries of gas in the San Joaquin Valley will give Central California and the great San Francisco Bay area a supply of this fuel. While there is much more gas available at the moment than California can use, there is no certainty as to how long the supply will last. Therefore, gas now blowing off should be kept in the ground. In a sense, gas is like water. Running to the sea, water is lost; impounded, it is made to serve a useful purpose. So also with natural gas.

The development of natural gas fields and establishment of a reserve is wise. The demand for natural gas fluctuates violently. The market consumes far more gas in the winter than in the summer—one authority states that at times there is as much as a 5 to 1 variation between the average summer day and a winter day of peak demand. Hence, there should always be available sufficient gas to meet the maximum public requirements.

Gas has another value than its use as fuel. It performs vital services in moving oil toward a well and lifting it to the surface. In times of shortage of crude oil its utilization for these purposes might be warranted, even if it were necessary to let it go into the air.

The detailed figures for the month of June indicate the magnitude of the waste of natural gas. Every day during that month 641,883,000 feet of natural gas from California oil fields blew off into the air. This is equivalent to the heat, or energy, value of 121,100 bbls. of fuel oil, or 34,600 tons of coal per day. For the whole month of June the loss of gas amounted to 19,256,500,000 feet, equal to 3,633,300 bbls. of fuel oil, or 1,038,000 tons of coal. In as much as there is no market for this gas, it is difficult to set down its worth in money; but applying a price of 7 cents per 1,000 feet, for which great quantities of natural gas are sold in the field, a figure of $1,347,955 for the month is reached.

From every point of view the conservation of natural gas and the elimination of waste are essential. There is an excess of gas now only because the oil industry is producing too much crude oil. If the gas is shut in the overproduction of crude will be curtailed, bringing supply and demand more nearly into balance. Slower and more orderly development, enabling the gas to perform its most valuable functions of driving oil to the well and lifting it to the surface, will result in a greater ultimate recovery of oil. More orderly development will prevent periods of great overproduction, and eliminate the great expense of storing surplus petroleum. All this will work for a more prosperous industry. It will prolong California's supply of both oil and gas, and defer a possible day of importation of petroleum by California.

For some years the oil industry has discussed "conservation" and the control of the production of crude oil. Many plans have been made; some of them have been tried. Nothing, however, quite so comprehensive as the new California law prohibiting the unreasonable waste of gas has been attempted. It deserves a thorough trial and the co-operation and support of the entire oil industry.

COAST COUNTIES GAS CO.

SAN FRANCISCO, Calif., Aug. 10.—Coast Counties Gas & Electric Co. has applied to the Railroad Commission for a certificate of convenience and necessity to supply natural gas to the town of Morgan Hill in Santa Clara County. Under an ordinance passed recently by the Santa Clara Board of Supervisors, Coast Counties Gas & Electric Co. has been granted a franchise to serve. Morgan Hill with natural gas for a period of 50 years.

INSULL CO. BUYS GAS LEASES

Central States Power & Light Co., owner of gas franchises in Elk City, Erick and about 20 other western Oklahoma towns, has purchased the Western Counties Gas Co., which has gas lines running from the Sayre Field, Beckham County, to the Oklahoma towns of Clinton, Cordell, Hobart, and intermediate points. Central States Co. is a unit of the Insull organization.

MUSKEGON CONSUMERS CONSIDER FUEL CHANGE

MUSKEGON, Mich., Aug. 10.—Although tests have been made and some arrangements completed by various Muskegon industries to change over from natural gas to fuel oil or coal if the gas flow of the Muskegon oil field plays out none has actually made the change and the daily consumption continues at about 14,000,000 feet. It is estimated that more than 25,000,000 feet of gas is being lost daily into the air from producing oil wells in the field and steps are now being taken by several operating companies to utilize this gas by putting it through compressors and thence into the gas lines.

Of the four gas line systems between the field and Greater Muskegon, a distance varying from 3 to 5 miles, the Continental Motors Corp. line continues to carry the heaviest load with a daily send-out of about 7,000,000 feet. Of this total about 6,000,000 feet is used at the Muskegon plant of the Continental Motors Corp. and the other 1,000,000 feet or more is used at the Brunswick-Balke Collender Co. plant.

The Muskegon Pipe Line Co., second largest line from the field to the industries of Greater Muskegon in the amount of gas carried, now has a daily send-out of more than 4,000,000 feet, the majority of which goes to Central Paper Co. Officials of Muskegon Pipe Line Co. predict there will be plenty of natural gas in the Muskegon Field for their operation at least for the next six months. They also are considering installation of a compressor station to use casinghead gas from producing oil wells.

The West Michigan Consumers Co., which has been equipped to repressure between 2,000,000 and 3,000,000 feet of gas a day since its line was placed in operation to supply a number of smaller industrial consumers of natural gas in Muskegon, now has a daily send-out of about 2,400,000 feet, according to John L. Robinson, general manager.

About 75 per cent is taken from upper Traverse oil wells and the rest comes from one lower Traverse dry gasser brought in several weeks ago with an initial flow of 10,000,000 feet a day and still making about 7,000,000 feet open flow. The company has enough Traverse gas to care for all of its needs.

Of the total send-out of about 2,400,000 feet, about 450,000 feet a day is being supplied to the Muskegon Traction & Lighting Co., whose dry gas wells have declined until they cannot be depended upon for more than half of the company's requirements. Daily send-out of the Traction company is about 900,000 feet.

With rock pressures throughout the field at from 200 to 300 pounds per square inch, former dry gassers are rapidly going to oil or in some cases to water. With the one exception of the Bowers & Lentz, Inc., No. 1 Seiner estate gasser, SW SE Section 5-10-16, Muskegon Township, all of the gas wells north of Daniloff avenue in that part of the field are making oil or water in varying quantities.

All gas line operators are hoping that deeper drilling will uncover a much larger supply of dry gas in the Niagara or Guelph formation than was found here in the Dundee formation about a year ago. Because of this there is great interest in the Johnson Oil Refining Co.'s No. 1 Kate Sovacool well, SW SE Section 2-10-17, Laketon Township, which is drilling at more than 2,400 feet on the way to the Niagara or a maximum of 3,500 feet. It is expected the Niagara, a large producer of gas in Canada, will be struck at 3,000 to 3,200 feet here.

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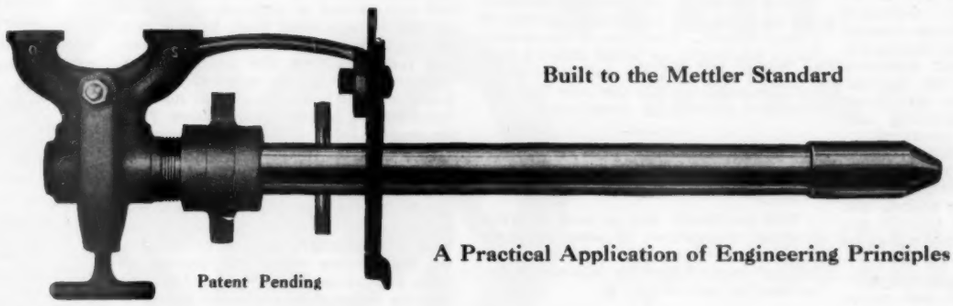
The METTLER

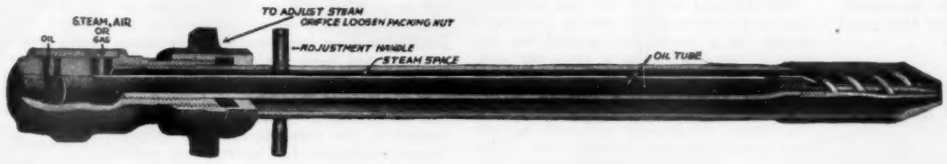
Quick Detachable Oil Burner



Built to the Mettler Standard

A Practical Application of Engineering Principles

Patent Pending



External Atomizing

The Mettler Wide Range, Quick Detachable, Steam, Air or Gas, Atomizing Oil Burner is an outstanding achievement well worthy of your serious consideration.

Detailed descriptions of superiorities have become superfluous. However, we have seen this burner operating where top of oil in gravity tank was only 4 feet above burner, steam pressure of 4 pounds at burner, two burners in use, operating 450 H. P. Boiler at 200% rating, and same burner operating successfully 80 pounds on oil, 125 pounds steam on 15 H. P. Boiler. While in operation fully adjustable, integral within itself, regardless of gravity or pressure on oil or when using steam, high or low pressure air, or gas as an atomizing agent.

Designed and constructed on absolutely correct scientific and practical engineering principles, is made of the best materials and impeccable workmanship obtainable, (bronze and brass) without a single compromise or excuse whatsoever.

Built to a standardized quantity production that allows us to quote exceptionally low prices.

It is a significant fact that the Mettler Gas or Oil Firing equipment is rarely subjected to unfavorable criticism.

Mettler Quick Detachable Oil Burners are made and sold by the manufacturer of the celebrated METTLER ENTRAINED COMBUSTION GAS BURNERS.

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Please quote Prices on the equipment for the following:

No. of Boilers.....
H. P...... **Make**.....
No. of Stills.....
Size..... **Type**.....
Name.....
Company.....
City..... ***State***.....

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

VISCOSITY OILINESS AND LUBRICATING VALUE

Is it true that oiliness is a property of oil which has no part in determining lubricating value, and is not connected with viscosity?

The discussion of this question has brought a letter from a friend who is an authority of high standing on the properties of lubricating oils; his thoughts on this subject are valued and are quoted in the following:

"Houghton and Co.'s Black and White for June, page 19, quotes you about oiliness and viscosity, and of course, you and I do not agree with them when they say viscosity is all bunk, since viscosity is the sole property of the lubricant which determines the friction under conditions of complete film lubrication, i.e., high speed and low pressure. However, oiliness is effective under high pressure and low speed and I cannot at all agree with the last sentence they quote from you, namely, 'It may be admitted that there appears to be some property of oils that aids in lubrication which cannot be explained by viscosity (true so far) yet such differences are small and cannot be regarded as being of major practical importance.' These differences are very large, especially since refiners have begun to improve oiliness by the addition of soaps to their oils, and I now have an 'oiliness machine' which measures coefficients of friction under conditions when oiliness is effective.

"Roughly, the coefficient drops from 0.80 to 0.10 with a light mineral oil as the percentage of lead in the bearing metal increases, oiliness being a function of the bearing metal as much as of the lubricant, i.e., it is a joint property. With the best of compounded lubricants, oil or greases, say 10 per cent aluminum stearate or 1 per cent stearic acid, the friction drops from about 0.095 to 0.030 as the percentage of lead increases in the bearing metal. These changes cannot be called 'small.'

"Oiliness improves, i.e., friction decreases, as the viscosity increases. In stopping and starting and in gearing, and according to Stanton, in the cylinders of internal combustion engines, we have 'boundary' lubrication, i.e., conditions under which oiliness is effective. Hence the practical significance of oiliness and need for oiliness tests even outside the question of cutting oils, where it is generally recognized that lard oil is superior. My lowest record is 0.02 with lard oil on 95 per cent lead."

While, of course, oiliness is an important property of lubricating oils, I am of the opinion that so far as general tests are concerned, viscosity is of more importance because the method for determining viscosity has been standardized and the apparatus required is available to a large number. I am also of the opinion that a lubricating oil which shows a good viscosity will also test well for oiliness and consequently, the few oils that fall down for oiliness are exceptional.

HEMPEL METHOD FOR LABORATORY DISTILLATION OF OILS

Will you kindly give us some information, or the address of some publisher from whom we can obtain it, about the Hempel method for the laboratory distillation of oil?—J. B. B.

The Hempel method for the examination of petroleum, and various petroleum liquids, is a convenient method for obtaining information as a basis for estimating what may be expected as to products and yields on a large scale in the refinery. The method gets its name from the flask, which was deisgned by the well known chemist of that name. This is a side-neck flask with a dephlegmating column.

The laboratory method in the United States usually follows the details that have been proposed by investigators of the United States Bureau of Mines. These may be found in Bulletin 207, The Analytical Distillation of Petroleum and Its Products, by Dean, Hill, Smith and Jacobs. The bulletin may be obtained from the Superintendent of Documents, Washington, D. C., upon payment of 15 cents.

From 200 to 300 c.c. of the oil is placed in the distilling flask, the fractionating column filled with iron chain, the thermometer set in place, connnection made with the condenser, and the receiving graduate in a beaker of ice water placed at the end of the condenser. Then teh heat is applied. "After the distillation has begun the heat is regulated so that the oil comes over at the rate of from 1 to 3 drops a second. The temperature is read when the first drop falls from the end of the condenser. A fraction is separated at every temperature point, above the first drop temperature, that is a multiple of 25 degrees Centigrade. If a Fahrenheit thermometer is used the cut limits should be equivalent to multiples of 25 degrees Centigrade, as for example, 122 degrees Fahrenheit, 167 degrees Fahrenheit, 212 degrees Fahrenheit, etc. The volume of each fraction is read and recorded as soon as possible after separation . . . and set aside for further examination, such as measurement of specific gravity.

The distillation is usually continued until a vapor temperature of 527 degrees Fahrenheit is reached. Certain oils, such as those from Pennsylvania, can often be carried safely to 572 degrees Fahrenheit or higher, but Mid-Continent and Western oils frequently start to crack between 527 degrees Fahrenheit and 572 degrees Fahrenheit.

The suggested interpretations are:

Fraction distilling below 392 degrees Fahrenheit: Gasoline and naphtha.

Fraction between 392 degrees and 527 degrees Fahrenheit: Kerosene.

Fraction above 527 degrees Fahrenheit: Lubricating oil and fuel oil.

SOURCES OF ALCOHOL MOTOR FUEL

I am interested in a process for making alcohol which could be used in place of gasoline for motor fuel. Have you any information about the different processes for making alcohol from sawdust or other wood material?—M. R. S.

There are numerous patents covering the manufacture of alcohol from wood and other forms of cellulose. A review of some experimental work by the Fuel Research Board, London, published several years ago, may give you the classification of the various materials and indicate what is being done. The material following is a partial quotation from the report.

Direct Fermentation of Cellulose. Most vegetable matter available for making power alcohol consists primarily of a mixture of cellulose, hemicellulose and lignocellulose. It is not likely that one type of micro-organism will be found in the near future which will convert all these substances into alcohol. Attention is being centered on the direct fermentation of hemicelluloses and cellulose, in the former case particularly on the direct fermentation of pentosans. As regards the direct fermentation of cellulose, progress has been made in the selection of pure cultures.

Hydrolysis of Pentosans and Fermentation of Pentoses. Experiments have advanced in the determination of the optimum conditions for hydrolyzing pentosans and the fermentation of the resulting pentoses.

Sisal Pulp. A small sample of dried sisal pulp has been examined and yielded 6.7 to 11 per cent fermentable sugars, produced mainly from the insoluble pentosans. The yields of alcohol-acetone varied between 6.7 to 11 gallons per ton of dried pulp.

Arrowroot Residue. It was found that yields of 53 gallons of commercial ethyl alcohol would be obtained in the fermentation of arrowroot residues by yeasts, after preliminary hydrolysis of the starch present by mineral acids.

Probably the cheapest source of a material for the manufacture of alcohol is molasses. Corn, potatoes and other vegetables are used. You will find a discussion of the subject of power alcohol and the various raw materials, together with methods, in Motor Fuels, by Leslie, page 482.

DETERMINATION OF TETRAETHYL LEAD

Will you kindly give me the most accepted chemical method for determining the amount of tetraethyl lead in commercial Ethyl Gasoline?—F. F. M.

Ethyl Gasoline is made by the addition of Ethyl Fluid to gasoline. One analysis of Ethyl Fluid indicated a composition of tetraethyl lead 54.5 per cent, ethylene dibromide 36.4 per cent, and halowax oil 9 per cent. The quantity of Ethyl Fluid added to gasoline appears to vary between 1 c.c. and 5.5 c.c. per gallon.

The common practice for estimating the quantity of Ethyl Fluid in a gasoline is to make comparisons with known standards by means of a knock testing apparatus. A simple analytical method, which is said to give very satisfactory results for determining the quantity of lead, is to convert all of the lead to the sulphate by the addition of sulphuric acid and evaporate the liquid to a solid residue. Details of this and other methods may be found in the references mentioned in Chemical Abstracts, Volume 19, pages 568 and 1,194; also Volume 20, pages 2,059, 3,232 and 3,243

BRIGHT STOCK MANUFACTURE

Can you give me any information as to the process by which bright stock is manufactured or give me any references as to where the information can be obtained?—G. W. C.

The term bright stocks is intended to include high grade lubricating oils which are distinguished by their clear bright color, usually with a green cast, high viscosity, high flash, and low pour point. They belong to the cylinder stock group but have a much lower pour point. They were first made by the cold settling process, the object of which was to separate the amorphous wax so that a product with a reasonably low cold test could be obtained, but this process usually required much time and the modern method is to make the separation at low temperature by means of a centrifuge. This process makes it possible to manufacture a bright stock in a few hours which formerly required several months' time.

Bright stocks may be made in several ways but the important considerations are that practically all of the wax must be removed and that the oil must be reduced to a satisfactory flash and viscosity. The raw material may be the residue from the crude oil after the gasoline, kerosene, gas oil, and wax distillate have been removed by fire and steam distillation. The first operation is usually that of treating the residue with sulphuric acid and after settling the oil is filtered. Many refiners have adopted the contact method for filtering; in this operation a special clay and the acid treated oil are thoroughly agitated and after partial removal of the clay by settling, the mixture is passed through a filter press. There are numerous details and various ways of doing this. Some refiners pass the oil and clay mixture through a pipe still before filtering. The oil is diluted with naphtha before passing through the filter press, the common practice is to have a mixture of 60-65 per cent naphtha and 40 to 35 per cent oil.

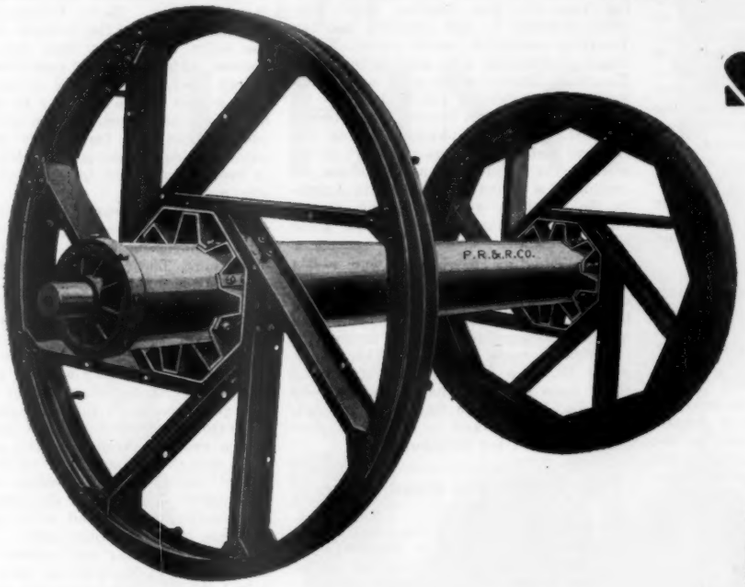
The filtered blend is chilled by a refrigerating system to a temperature which may be from 15 to 40 degrees below zero Fahrenheit according to whether or not it is desired to go to the extreme for pour test specification. The cold blend is then run through the centrifugal machines. These machines run at a high rate of speed so that the force generated by the revolving cones is estimated to be between 12,000 and 15,000 times as great as the force of gravity operating in the old cold settling method for the separation of the wax from the oil. Each machine has a capacity of 100 bbls. of blend a day. Two streams leave the centrifuge, one being amorphous wax and the other the naphtha oil blend. The amorphous wax may be sold as petrolatum or charged to cracking still for the manufacture of gasoline.

The oil and naphtha, practically freed from wax, is pumped to a still. Here the naphtha is removed and the bright stock finished to the required tests. The final distillation is usually made in the presence of large quantities of steam and frequently it is necessary to cool the oil in the receiving tanks to about 200 degrees Fahrenheit and then blow the oil bright with preheated air.

It must be understood that this is simply a brief outline of one method for making bright stocks. There are many details concerning quantities of acid, clay and temperature, which must vary with the character of the oil which is processed.

PARKERSBURG

Has served the oil fields of the world for 32 years



STEEL BULL & CALF WHEELS

Shafts fabricated from 16"x3/8" wall, 18"x1/2" wall, 24"x1/2" wall and 18"x1 1/8" wall, O. D. pipe.

Gudgeons are pressed into shaft under hydraulic pressure then bolted through shaft and gudgeon band—they can't come loose.

Bull Wheels furnished in 7 1/2 and 8 foot diameters with 9, 12 or 14 inch face brake wheel, Tug Wheel either double or triple groove, channel arms, octagonal hubs made from universal mill plates.

An economical replacement for heavy drilling bull wheels is found in 6 foot diameter wheels with 13 inch O. D. by 5/16 inch wall shaft, 13 foot 6 inches shoulder to shoulder of gudgeons.

Write today for prices.

THE PARKERSBURG RIG & REEL COMPANY

EXECUTIVE OFFICES & MAIN PLANT

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PARKERSBURG PRODUCTS

Steel Derricks and Steel Crown Blocks	■	Rig Irons (A.P.I. Standard)	■
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Steel Wheels	■	Bolted Steel Tanks	■
All-Steel Standard Rigs	■	Miscellaneous Drilling Equipment	■

Check the equipment in which you are interested, tear out and return this coupon, with your name and address, to us, and we will send you complete information on the items checked.

EQUIPMENT AND SUPPLIES

COG-BELT DRIVES HAVE DISTINCTIVE FEATURES

Uses, construction and advantages of cog-belt drives are explained, with illustrations, in a bulletin, "Cog-Belt Drives for Industrial Service," issued by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. The device consists of one or more cog belts operating in the grooves of a driving and a driven pulley, the number of belts used depending upon the horsepower to be transmitted, the speed and the characteristics of the driven load.

Industrial applications of the cog-belt drive include pumps, compressors, machine tools, conveyors and oil-well pumping equipment. The manufacturers say a saving in space is effected through the use of small pulleys and short center-to-center distances. Vibration and sudden shocks are not transmitted from one machine to the other. There is no necessity for lubrication or belt dressing. Adjustment of centers (caused by belts seating into grooves) is infrequent. Replacement of belts may be made at convenient times, for the failure of one belt will not stop operation. The drives are not affected by moisture or dust. The gripping power of the belts gives a more positive speed ratio and allows reduced belt tension.

The flexibility of cog belts reduces the distortion when passing over the pulleys, which in turn reduces the heating effect and gives longer life. It also allows the use of small pulleys and high belt speeds. The "raw edge" construction gives a high coefficient of friction, thus reducing the slip and permitting reduced belt tension.

The cog construction maintains crosswise rigidity, thus preventing distortion of the belts when flexed and preventing sticking in the grooves. The stretch is removed in the manufacturing process, and one adjustment of the center distance to off-set the seating of the belts in the grooves is usually sufficient.

YALE & TOWNE BUYS STUEBING COWAN CO.

The Yale & Towne Manufacturing Co., Stamford, Conn., has contracted to purchase the assets and good will of the Stuebing Cowan Co., Cincinnati, Ohio, and Holyoke, Mass., makers of hand lift trucks.

For many years the Yale & Towne Manufacturing Co. has been making and distributing material-handling devices consisting of hoisting apparatus, both hand and electrically operated, overhead trolleys and overhead trackage systems. About 10 years ago electric industrial trucks were added. The purchase of the Stuebing Cowan Co. adds single and multiple lift hand trucks to an already large line of devices for the handling of materials.

Sales of material-handling devices will continue to be under the supervision of James C. Morgan, and arrangements have been made under which the executive personnel of the Stuebing Cowan Co. will enter the services of Yale & Towne, Walter C. Stuebing acting as assistant to Mr. Morgan, in charge of all truck sales, and William Stuebing continuing to act as superintendent of the plant in Cincinnati. A large modern factory for the manufacture of hand lift trucks and skid platforms is in process of construction in Cincinnati.

The Torchweld Equipment Co., Chicago, manufacturer of gas welding and cutting apparatus, is mailing a 40-page catalog covering the entire Torchweld line.

PRECISE UNIFORMITY MARKS PIPE LENGTHS

The Naylor Pipe Co., Chicago, in a bulletin just issued has the following to say concerning Naylor pipe:

"Naylor pipe is made in uniform lengths. Every end is absolutely square and every length of pipe is precisely as long as specified. The advantages of uniform lengths, however, come with the completion of the line and with its maintenance. If replacement ever becomes necessary you can uncouple; roll out the old pipe and roll in a new length without any cutting or fitting. Lengths of Naylor pipe are interchangeable due to their precise uniformity.

"Naylor pipe is made with an electric welded spiral lock-seam which provides a truss of great strength. It is formed on a mandrel from a continuous strip of metal and subsequently cut to length by a metal saw. This method of manufacture results in exceptional uniformity of diameter and permits uniform lengths at no increased cost. Ends are prepared for all types of coupling.

"Where corrosion is a factor, and it usually is in pipe lines, the material of which pipe is made becomes of importance. Toncan iron was chosen as the best metal standard for Naylor pipe. Toncan iron is an alloy of refined iron, copper and molybdenum. It has the natural corrosion and rust resistance of iron further fortified by the properties of copper and molybdenum."

WODACK ALL PURPOSE DRILL

The new Wodack all purpose portable electric drill, made by the Wodack Electric Tool Corp., Chicago, combines lightness with power. A General Electric motor of ample reserve power is built in for direct or alternating current. An oversize double pole trigger switch is in convenient position. Ball and roller bearings are used, the heavy thrust loads being carried by Timken roller bearings. Hardened gears are simply assembled. Grease compartments are designed for long periods of operation, and ventilation is provided by an oversize fan for quick cooling during idle running.

YUNGLING IMPLEMENTS TAKEN OVER BY BAKER

Baker Oil Tools, Inc., of Huntington Park, Calif., has purchased from Paul Yungling, the sole rights of manufacture and distribution of fishing tool specialties heretofore handled by Marvel Fishing Tool Co., Los Angeles, Calif. The items included in this purchase are the Yungling improved spiral guide, Yungling's combination pipe parting overshot, Yungling's Marvel screw grab, and Yungling's Marvel twistoff safety device.

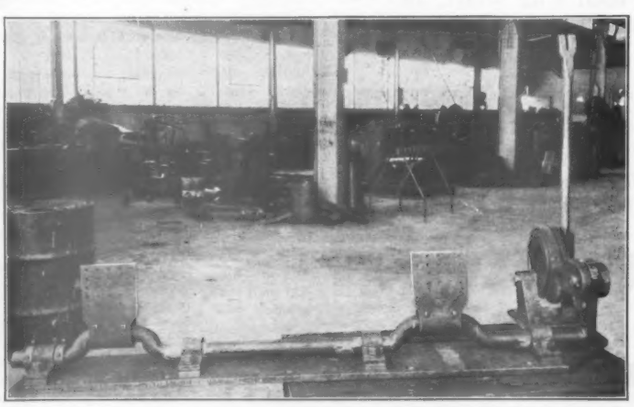
Mr. Yungling first located in California in 1891, and got a pumping job in the Newhall fields. This was the start of his work in the oil industry and with the exception of a period spent in South America, he has been working in and around oil fields in many parts of the globe since that time.

Mr. Yungling personally was called upon to solve fishing problems, working under conditions which sometimes tried his ingenuity. Out of this experience were born the ideas which came to fruition in the fishing tools which bear his name. Since 1923 he has been manufacturing these tools and they have been shipped to India, Burma, the East Indies, South America, Mexico, and to New York purchasing agents for distribution.

L-B LIGHTNING HOSE-SAVER

L-B Lightning rotary hose-savers, manufactured by the Leland Brothers Co., Los Angeles, Calif., are made of an especially treated metal designed to withstand high pressures, threaded with male and female standard 8 thread. There are plug openings in the body, 11½ thread, in which are screwed safety fuse plugs. These plugs are so designed that whenever the pressure exerted goes beyond the calibrated pressure for which the hose-saver plugs are set a diaphragm inside the plug shears and the fluid escapes through the open orifice into a disintegrating chamber, whence it is discharged through a series of openings as a harmless spray. The pumps are stopped for a fraction of a minute while the safety plug is unscrewed and a new one installed. Drilling can be resumed without affecting any other equipment.

SMITH DRAW WORKS BRAKE HAS SELF-LOCKING DEVICE



The H. C. Smith Manufacturing Co., Inc., Los Nietos, Calif., announces introduction of the Smith draw works brake, first developed about two years ago and improved since then. The leverage ratio has been raised about three to one, thus reducing the kick-back of the brake-rod. This results in a safety feature and lessens the labor and shock to which the driller is subjected.

All parts of this brake are rigid and heavy and capable of standing abuse. Another important feature is that after the brake-rod has passed the center line, the brake actually locks itself and could be left safely without being locked down, although this, of course, is not advised.

TURBINE-GENERATOR SET CONTAINS IMPROVEMENTS

The latest developments in small turbine engineering are said by the manufacturers to be embodied in the 25 to 50 kw. geared turbine generator sets, made by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. Though retaining the general design of the older type units, they are said to possess added features conducive to efficient operation. Safety devices eliminate danger to the operator in the event of a unit overspeeding. An addition to other mechanical features is the three point foundation support, which permits of every adjustment for maintaining self alignment.

The unit is a geared turbine-generator set that requires only piping and electrical connections before being ready for operation. The complete unit occupies a floor space of approxmately 3 feet by 6 feet. It consists of a turbine of the single rotor re-entry type bolted directly to the gear housing and supported by it. This feature permits complete expansion of the turbine cylinder without any damaging effect on the alignment of the unit. The gear housing in turn is bolted to the generator frame with a spigot joint.

The gear is carried on the generator shaft and the turbine rotor on the pinion shaft. Owing to short length shafts, of generously proportioned diameters, rigid construction is obtained with only four bearings in the complete unit.

The gear housing and turbine cylinder are made of high grade cast iron and are bolted together on a horizontal joint, thus permitting quick inspection or renewal of the operating parts. A heavy rib is cast inside the turbine cylinder around the periphery of the motor. The cylinder is further strengthened by the addition of two extra large diameter steel bolts. The cylinder and gear housing are supported from the generator frame and do not require a bedplate.

NEW FIELD OFFICE IS OPENED

The Youngstown Sheet & Tube Co. announces the opening of its new field office at 905 Exchange National Bank Building, Tulsa, in charge of J. A. Mussler and H. B. Duffield. Both men have had wide mill and field experience. Mr. Duffield spent a year in South America for his company and Mr. Mussler spent one year in Burma, Iraq and South America on a special mission for the company. The Youngstown Sheet and Tube Co. has large mills in Youngstown and Indiana Harbor where it manufactures seamless and lap-welded casing, drill pipe, line pipe and tubing. At the present time, production is concentrated on the manufacture of special analysis heat-treated seamless casing and drill pipe which has an exceptionally high yield point and tensile strength.

PERFEX RECEIVES BIG ORDER

The Perfex Corp., Milwaukee, Wis., manufacturers of heavy duty radiators, has received a large production order from the Allis-Chalmers Manufacturing Co. for United Tractor radiators. When the United Tractor & Equipment Corp., a $125,000,000 co-operative manufacturing and marketing enterprise in the farm implement field, recently contracted with Allis-Chalmers for tractors, the Perfex Corp. was asked to design a heavy duty radiator that could be produced economically. This was done and new modern production equipment has been provided for manufacturing purposes. The cores are of the new staggered tube, super-cooling type, developed by Perfex this year.

WHEN YOUR DERRICK BURNS

AND DROPS YOUR TUBING

Fully Patented

"BE NONCHALANT;" ... your GUIBERSON TUBING CATCHER

PREVENTED SERIOUS TROUBLE

How beastly stupid it all seems, when you really get down to it, how the men should tear about, hither and thither, crying out against the flames and troubling you with their silly fears. You know, you really can't be bothered. The cool, fragrant enjoyment of your cigarette is readily more preferable than a burning derrick, when you have a Guiberson Catcher at the bottom of your tubing. So be ever so carefree about the whole business . . . your Guiberson Tubing Catcher has saved your tubing and all is well that can be well in the well.

The Guiberson Tubing Catcher will stop the fall of a string of tubing within three inches, neatly and positively. Its test requires that it stop within this distance, when dropped alone, in an empty casing, before it can leave the factory. No fluid is necessary in the hole, because of the strong spring. The retarding action of mud and paraffin is overcome by the heavy striker weight. The slips are kept in perfect alignment and are guided instantly to the casing walls by dove-tail tracks. "Protection" is a sure word, when you say it with the Guiberson Tubing Catcher.

"Better Be Safe Than Sorry"

THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas
California Branch: 1506 Santa Fe Ave. Los Angeles

402 W. First St., TULSA
321 Osage St., PONCA CITY
506 Trust Bldg., NEWARK, O.

GUIBERSON

BETTER BE SAFE GUIBERSON THAN SORRY

EQUIPMENT AND SUPPLIES

SINGLE HANDLE REDUCES WEIGHT OF PIPE TONGS

The single-handle feature of the W-K-M Petol pipe tongs, of which the W-K-M Co., Inc., Houston, Tex., is distributor, is said to reduce weight 30 per cent, increase speed 35 per cent and to eliminate finger crushing. The tongs are instantly applied and removed from the pipe, while the weight of the tongs, aided by spring tension, engages the bits positively and helps to gain perfect ratcheting. A bumper cast integrally with the lower jaw limits jaw closure and prevents crushing of the pipe. The tongs are made of chrome nickel steel castings, heat-treated for high elastic limits.

Bits provided with the tongs are of the four-way type, made of high-speed lathe cutting steel. These are fitted with quick change wedges so that bits may be reversed at need. The handle is cast in the "T" shape to withstand strain and retain elasticity.

W-K-M Petol pipe tongs are made in sizes ranging from 1 inch to 12 inches. The 1 inch tongs weigh only seven pounds and the largest, the 12-inch tongs, are 110 pounds. Extra extension of the handle can be gained by slipping a length of pipe over it.

FISHER GOVERNOR CO. BUYS APEX REGULATOR

The Fisher Governor Co., Marshalltown, Iowa, has purchased the Apex Regulator Co., Decatur, Ill. The Apex products are closely allied with those of the purchasing company, which manufactures automatic pressure control specialties for steam, water, air and the oil and gas industry. The Apex line consisted of smaller valves for less diversified fields, and it is planned to continue to specialize on smaller valves for plumbing, refrigerating machines, oil burners and similar equipment.

A. W. Cash, inventor and founder of the Apex company, will act as engineer and have general supervision of the new plant. All of the plant equipment of the Apex Co. will be moved to Marshalltown. The Fisher Governor Co. will operate the Apex Regulator Co. as a separate unit, but its products will be handled by the established Fisher representatives.

DIESEL BUILDERS ORGANIZE

With the rapid growth of the use of Diesel engines in all types of industrial, public utility and municipal service as well as in the railway, automotive, aviation and marine fields, the manufacturers of Diesel engines have realized the need for a closer contact with each other and with the problems of the user. As a result, 12 of the leading builders, representing practically the entire output of Diesel engines in the United States, have organized the Diesel Engine Manufacturers Association. The association has as its primary object the advancement of Diesel power in America and a broad program of co-operation with the users of this type of power. Greatest benefit to the users of Diesel power is expected to come through development of suitable standards of manufacturing and engineering practice. Such active problems as specifications for oil fuels, wider distribution of accepted fuels and similar subjects will have the attention of the manufacturers.

Joseph T. Ryerson & Son, Inc., Chicago, have issued a bulletin on Nikrome steel a specially heat-treated alloy steel for the more difficult and heavy-duty industrial uses, particularly recommended to concerns that do not maintain a heat-treating department.

MADE DISTRICT MANAGER

William Robbins

The Chisholm-Moore Hoist Corp., Towanda, N. Y., announces the appointment of William Robbins as district manager in charge of its Chicago office. Mr. Robbins is well known in the field.

HERCULES ANNOUNCES A PROGRAM OF EXPANSION

The Hercules Motors Corp., of Canton, Ohio, to provide facilities for increased production of Hercules engines and power units, is enlarging its plant capacity more than 50 per cent. About 600 additional workmen will be employed and $500,000 will be spent for a new building and the installation of additional machinery and testing equipment.

Three and one-half acres adjoining the present plant has been acquired and construction already has been started on the new factory building. This unit, adding 68,000 square feet of floor space, is expected to be completed before the first of next year.

JOINS CHAIN BELT CO.

Robert B. Marshall, conveyor sales engineer, has joined the Chain Belt Co.'s conveyor division with headquarters at the company's New York City office, 50 Church Street. Mr. Marshall has spent the last 21 years in the conveyor business. In addition to the complete line of Rex conveyors, he will handle the belt conveyors, glass batch handling equipment and silo storage system manufactured by the Stearns Conveyor Co. of Cleveland, a division of the Chain Belt Co.

AVIATION EDITOR NOW WITH EMSCO AIRCRAFT

W. R. Yahner, recently made advertising manager of the Emsco Aircraft Corp., Downey, Calif., was a newspaper reporter when aviation engaged his enthusiastic interest. Following his graduation from high school he got his first newspaper training on the Tri-State News Bureau, Pittsburgh, Pa., and he was assistant night manager of that bureau when he resigned to go to the Gazette Times of that city, later being employed on the Chronicle Telegraph and the Pittsburgh Press.

W. R. Yahner

His growing interest in flying resulted in his being made aviation editor of the Press. While filling that position he made two round trips from New York to Los Angeles by airplane. On the second of these he was copilot of the Pittsburgh Press-Mayer entry in class B of the 1928 air derby. Ed Schultz was pilot and the plane took fourth prize money. During the last year of his service on the Press he was associated with Clifford Ball, contractor for the air mail line between Pittsburgh and Cleveland.

Mr. Yahner left the Press to become manager of the aviation division of the McKnight-Robinson Co. advertising agency in Pittsburgh and he was with that organization when he accepted his present post with Emsco Aircraft.

THIRD BOEING DELIVERED

The third Boeing plane to be used for commercial purposes was delivered July 13 to the Empire Companies, Bartlesville, Okla. Virgil D. Stone, Empire pilot, made the delivery flight from the Seattle factory to Bartlesville, accompanied by E. L. Peck, aviation division manager. Boeing production has been confined almost exclusively to transport, air mail service and army and navy activities.

"Cities Service-Empire" is a four-passenger, closed cabin Boeing biplane, with pilot cockpit in the open. It is the same type as the Boeing Air Transport flies in its daily mail and passenger service between Chicago and San Francisco as well as the Pacific Air Transport between Seattle and Los Angeles. Cities Service gasoline and oils were used throughout the flight between Seattle and Bartlesville and proved satisfactory, according to the Empire Companies.

VARCO ROCK BIT RIGHTS TAKEN OVER BY W-K-W CO.

Plant of the Wieman-Kammerer-Wright Co.

Wieman-Kammerer-Wright Co., Inc., manufacturer of the WKW rotary bit, has closed negotiations with the Abegg & Reinhold Co., Inc., of Los Angeles, whereby WKW acquired all the patent and manufacturing rights for the Varco rock bit. An addition, costing $150,000 will be made to the WKW plant at Hollydale for the production of the rock bits and cones.

The Varco rock bit was developed by the Abegg & Reinhold Co., Inc., who for the last 15 years have specialized in the heat treatment of steel parts entering into the construction of oil well machinery and other commercial uses. The Varco rock bit has been on the market for two years.

The Abegg & Reinhold Co., Inc., will continue manufacturing the bit and cones for the WKW company, supplementing the present facilities of WKW, until the new addition to the WKW plant is in operation. Distribution will be made by the WKW company through its various distributors in California and the Mid-Continent. Export shipments will be handled through the export offices of the company in New York.

Jesse C. Wright is president of the WKW company, and Edgar H. Wilson, formerly with the Reed Roller Bit company, is vice president and sales manager.

Greater Efficiency in Drilling Operations assured by

The new type "C" H.C.SMITH Demountable DRILLING BIT

Difficulties frequently have been encountered in modern drilling practice which could not be overcome by existing drilling tools. To successfully cope with these conditions H. C. Smith has developed the new Type "C" Demountable Drilling Bit, which retains many of the carefully designed features of other Smith bits, and also includes several new features of blade and tooth position which have proved to be particularly effective in modern drilling. Many runs in various fields have demonstrated its remarkable speed in making hole through all formations, and its ability to stand up longer under severe service. We shall be glad to send you complete information and records of performance without obligation.

H. C. SMITH MANUFACTURING CO., INC.
Los Nietos, California

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Bakersfield, Calif. Ventura, Calif.
Cable Address: "Smithco, Whittier"
Oil Well Supply Co., Exclusive Sales Distributors, Outside of California, for H. C. Smith Coring Equipment and Demountable Drilling Bits.

The H. C. Smith Type "C" Coring Outfit — a companion tool to the new Type "C" Bit. Use of these two efficiency tools insures outstanding success in all drilling operations.

Crane equipment for oil and gas fields

No. 350½

Iron body globe valve, with union bonnet and renewable seat. Easily accessible for regrinding. Angle pattern is No. 352½, horizontal check valve is No. 366½, angle check valve is No. 367½. See Catalogue 51, page 123.

No. 483

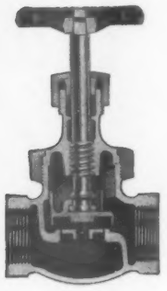
Double disc cast steel gate valve. Rising stem. Discs are accurately guided in the body. Wedging mechanism is brass to iron. Accurate machining reduces friction in all sliding parts. See circular No. 218, page 8.

No. 490

Iron body clamp gate valve. Readily permits rapid cleaning-out at the gate. Also supplied in quick opening pattern No. 492, and all-iron No. 488. See Catalogue 51, page 160.

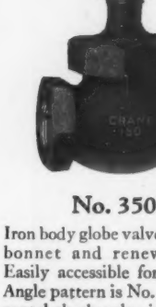
No. 465½

Iron body solid wedge gate valve. Outside screw and yoke. Widely used in oil and gas service lines. See Catalogue 51, page 151.



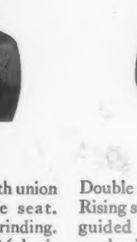
No. 7

Globe valve, with union bonnet and easily replaceable composition disc. No. 7 angle valve and No. 27 check valve complete this line of renewable disc, brass valves. See Catalogue 51, page 15.



No. 98½-E

Heavy all-iron union. Malleable. The accurate ground joint gives absolutely leak-proof service without gaskets. See Catalogue 51, page 333.



No 182-E

Oil pattern short radius elbow of extra heavy cast iron, with long thread lengths for pipe line service. See circular No. 218, page 52.

No. 760

One of a group of Crane oil malleable iron fittings for oil lines. Long thread chambers. Heavier than ordinary malleable, and will withstand greater strains than cast iron. 6" and over made in chill molds. See circular No. 218, page 44.

No. 260-E

One of a group of heavy malleable fittings for use where severe pressure strains occur. Long thread chambers. Sizes over 4" made in chill molds. See circular No. 218, page 46.

Nigger Head

A many purpose fitting for oil field boilers. Frequently it eliminates the necessity for several other fittings, besides saving threading and labor. See circular No. 218, page 58.

No. 773

Ground joint flange union. Malleable iron. Recommended for use in connection with standard malleable oil fittings. See circular No. 218, page 68.

No. 245-H

High pressure malleable flange union. Ground joint, brass to iron seat. Made in chill mold. Will withstand severe strains. See circular No. 218, page 69.

Learn more about these materials backed by ***74 years of experience.*** Write for circular No. 218; it is a catalogue covering the particular division of the oil industry in which you are interested.

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Branches and Sales Offices in One Hundred and Eighty Cities

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

(Continued from Page 52)

ELLSWORTH COUNTY

Tatlock et al's No. 1 Sackem, C SW SE Sec. 25-17-9w....Spudding.
The Texas Company's No. 1 Sherman, NE SW Sec. 16-17-6w ....Drlg. 1,830 ft.

GRAHAM COUNTY

Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w ....Drlg. 4,000 ft.

GREENWOOD COUNTY

F. Konkay et al's No. 1 Rock, NW NE NE Sec. 7-27-12..Spudding.
Ward & McGinnis' No. 1 Anderson, NE NW SW Sec. 13-25-10 ....Drlg. 630 ft.

HARPER COUNTY

Tom Slick Oil Co.'s No. 1 Miller, SE cor. Sec. 13-34-8w ....Drlg. 3,550 ft.
Tom Slick Oil Co.'s No. 1 Thompson, NW cor. Sec. 10-32-6w ....Drlg. 4,100 ft.
Independent & Reserve Oil Co.'s No. 1 Moulds, C NE Sec. 7-24-1w ....Drlg. 2,600 ft.

HARVEY COUNTY

Liggett et al's No. 1 Regier, C SE NW SE Sec. 2-23-3w..Rig.
Payne and others' No. 1 Ady, NE NW SE Sec. 16-24-1 ....Drlg. 1,370 ft.
Deering-Marshall's No. 1 Dick, Sec. 4-25-2w ....Drlg. 2,825 ft.
McCulloch et al's No. 1 Prouty, NW cor. SW Sec. 3-23-1w ....Fishing 2,020 ft.
Roth & Parrent's No. 1 Brombrowsky, NW cor. Sec. 26-22-1e ....Fishing 2,650 ft.
Mrs. Gay et al's No. 1 Grove, C NW NE NW Sec. 29-23-1w ....Shut down 3,102 ft.
Jolly & Ogg's No. 1 Randall, NE cor. NE Sec. 11-24-1w ..Shut down 3,444 ft.
Rosenthal et al's No. 1 Ingalls, C NW SW Sec. 24-23-3w..Shut down 3,295 ft.
Jolly & Ogg's No. 1 Hupp, SE cor. NE Sec. 22-23-1w ....Fishing 3,220 ft.

HODGEMAN COUNTY

Phillips Pet.'s No. 1 Hausman, NW NE Sec. 30-22-22w ..Drlg. 1,145 ft.

JEFFERSON COUNTY

Wichita Oil Co.'s No. 1 Simpson, NW cor. SW SW Sec. 19-10-17 ....Rigged up and shut down.

KIOWA COUNTY

British-American's No. 1 Woodward, NE cor. Sec. 35-27-17w ....Drlg. 4,320 ft.
British American-M. M. Valerius, NE cor. Sec. 35-27-17w..Location.

KINGMAN COUNTY

Gypsy Oil Co.'s No. 1 Kincaid, NE cor. NW Sec. 18-29-5w ....Siliceous lime 4,513-23 ft.; drlg.

LANE COUNTY

Robinsen's No. 1 Dickerson, Sec. 11-18-27w ....Shut down 2,650 ft.
Blankenship Pet. Co.'s No. 1 Schaeffer, NE cor. NE Sec. 24-16-28w ....Spudded and shut down.

LYON COUNTY

Blair et al's No. 1 Martindale, C NW NE NE Sec. 27-21-11 ....Drlg. 710 ft.
Gordon & Stats' No. 1 Murphy, NW NE Sec. 32-21-11 ....Drlg. 650 ft.

MARSHALL COUNTY

Irwin et al's No. 1 Cooper, NE NW Sec. 10-3-7e ....Shut down 2,240 ft.

MARION COUNTY

Skirwin et al's No. 1 Unknown, NW SW NW Sec. 10-17-3 ....Rig on ground.
Empire's No. 1 Reising, NE NW NW Sec. 34-20-2 ....Location.
Davis et al's No. 1 Bartel, SE NE Sec. 1-19-1 ....Rig.
Shell Pet. Corp.'s No. 1 Scully, NW NE Sec. 34-18-2e ....Drlg. 2,640 ft.
Hobworth et al's No. 1 Skiles, SE NW NW Sec. 30-21-3e..Drlg. 3,063 ft.
General Utilities Co.'s No. 1 Propp, NE cor. SE SW Sec. 8-19-4e ....Drlg. 2,435 ft.

McPHERSON COUNTY

Larlo et al's No. 1 Diener, SE SW Sec. 10-20-1w ....Rig.
Perry et al's No. 1 Wade, C SE Sec. 20-19-4w ....Location.
E. W. Marland's No. 1 Swanson, NE SW NE Sec. 36-18-4w..Drlg. 2,080 ft.
Slick, Pryor & Lockhart's No. 1 Gratton, C NE NW NW Sec. 34-20-3w ....Fishing 2,150 ft.
Helmerich & Payne's No. 1 Klassen, SE NE NE Sec. 14-21-1w ....Shut down 2,390 ft.
Helmerich & Payne's No. 1 Rosen, NE cor. SE SW Sec. 25-21-2w ....W. X. 3,480-3,506; H. F. W.; shut down.
McPherson Gas Co.'s No. 1 Chinberg, NW cor. Sec. 18-19-2w ....Shut down 2,996-3,009 ft.; show oil; 5,000,000 ft. gas.
McPherson O. & G. Co.'s No. 1 Rasmusson, SW cor. Sec. 8-18-3w ....Shut down 2,445 ft.
Ted Washabaugh's No. 1 Vosshell, NE cor. NE Sec. 9-21-3w ....Fishing 3,301-04 ft.; show of oil.
J. H. Tatlock's No. 1 Hayer, C SW NE Sec. 32-20-1w ..Wilcox 3,474-79 ft.; water; shut down.

MORTON COUNTY

White & Cheney's No. 1 Unknown, NE cor. Sec. 11-34-42w ....Rig on ground.

NESS COUNTY

E. W. Marland, Inc.'s No. 1 Moses, NE SE Sec. 7-18-25w..Drlg. 3,100 ft.

OSAGE COUNTY

Goebel-Bending's No. 1 Bartee, C SW SW Sec. 28-17-15..Shut down 1,190 ft.

OSBORNE COUNTY

Phillips Pet. Co.'s No. 1 Greive, NW SE NE Sec. 6-7-12w..Drlg. 1,265 ft.
Mid-Kansas' No. 1 Boyce, SE cor. NW Sec. 18-6-13w ..Drlg. 1,260 ft.
Trees Oil Co.'s No. 1 Payenter, NE cor. SE SE Sec. 22-6-15 ....Drlg. 3,309 ft.

PAWNEE COUNTY

F. C. Troupe's No. 1 Lovett, CEL NE NE Sec. 31-21-16w.Shut down 1,560 ft.

PHILLIPS COUNTY

Watsonian-British American's No. 1 Weilman, C SW SW Sec. 34-2-19w ....Drlg. 3,570 ft.

PRATT COUNTY

O'Haver & Jones' No. 1 Lunt, C SW NW Sec. 15-28-14w..Shut down 2,865 ft.

RENO COUNTY

Witt's No. 1 Olsen, C SE NW Sec. 14-22-6w ....Rig.
Empire O. & R. Co.'s No. 1 Henderson, SW cor. Sec. 35-25-4w ....Drlg. 4,285 ft.
Skelly Oil Co.'s No. 1 Birkett, NE SW Sec. 30-24-7w ....Drlg. 2,685 ft.
Milmar Oil Co.'s No. 1 Strickley, SW cor. SW Sec. 17-26-5w ....Drlg. 3,205 ft.

RICE COUNTY

Derby Oil Co.'s No. 1 Johnson, C NW NE SE Sec 24-20-6w ....Spudding.
Milmac's No. 1 Cain, C SE Sec. 29-19-7w ....Rig
Allison & Fitzwilliams' No. 1 Poland, NE cor. SW NE Sec. 36-19-8w ....Cellar.
Higgins & Steinbuchel's No. 1 Shurr, NE cor. SW Sec. 21-20-10w ....3,278-80 ft.; 100 bbls. showing; testing.

RILEY COUNTY

Grey et al's No. 1 Smith, NE SE Sec. 30-6-6 ....Drlg. 1,500 ft.
Derby & Shaw's No. 1 Lindstrom, NE cor. Sec. 32-7-5e ..Drlg. 1,240 ft.

RUSSELL COUNTY

Prairie Oil & Gas Co.'s No. 1 Brungardt, C NW SE NW Sec. 31-12-13w ....Rig.
Empire and Prairie's No. 1 Bocka, C SE NE NE Sec. 23-15-14w ....Rig.
Allison & Fitzwilliams' No. 1 Mohenny, NW SE Sec. 5-14-12w ....Drlg. 3,376 ft.

ROOKS COUNTY

Kruger et al's No. 1 Stels, NW SE SW Sec. 12-9-16w ..Shut down 50 ft.
Burford-Brim's No. 1 Toxa, Sec. 22-9-17w ....Spudded; shut down.

RUSH COUNTY

Sinclair Oil & Gas Co.'s No. 1 Seur, C SW NW NW Sec. 8-18-17w ....Drlg. 3,635 ft.

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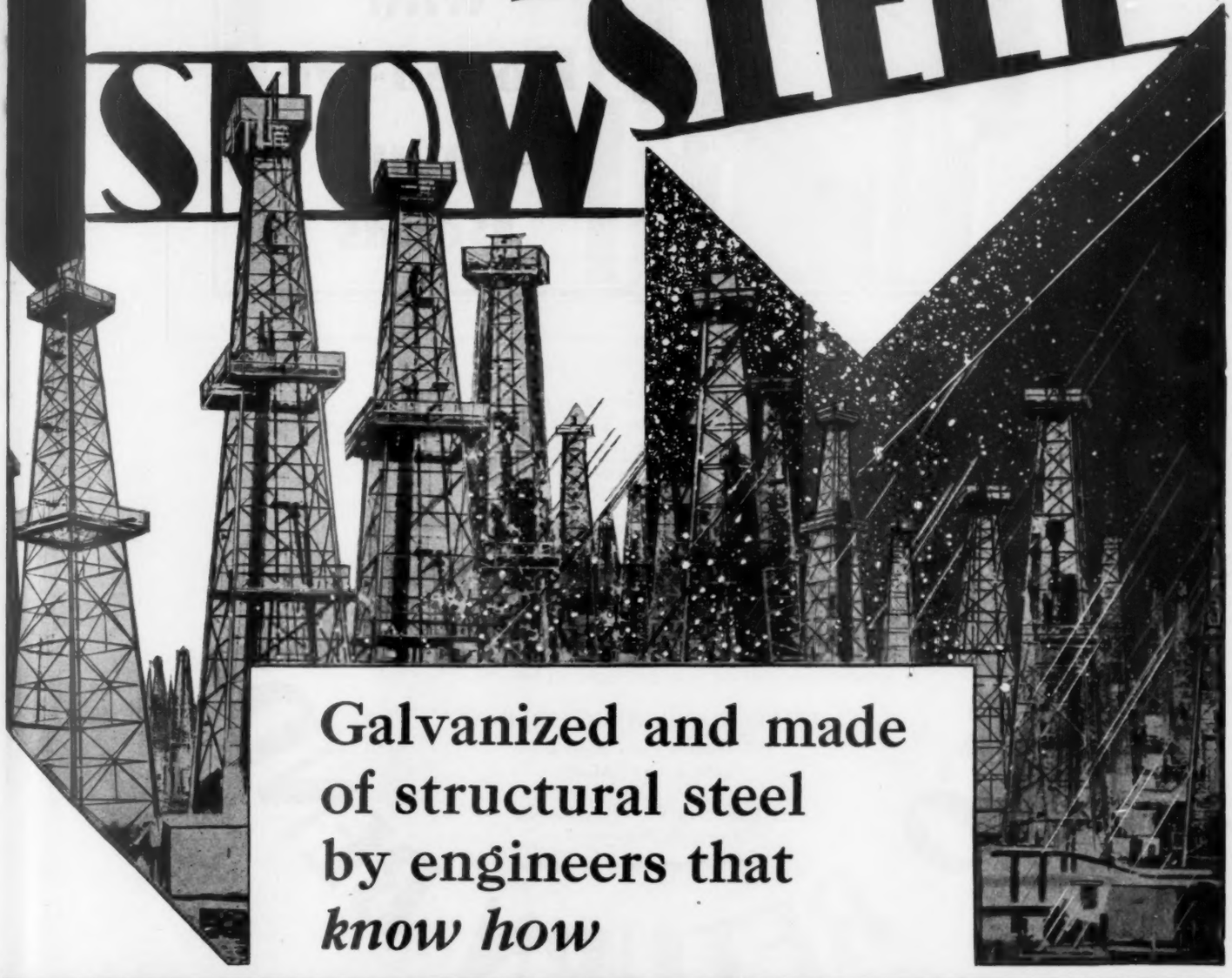

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Central Commercial Oil Co.'s No. 1 Brock, SE cor. SW SW Sec. 12-17-16w ..... Shut down 50 ft.
Danciger Oil Ref. Co.'s No. 1 Pivonka, NE cor. SW NE Sec. 17-19-17w ..... Drlg. 3,680 ft.

SALINE COUNTY

Austin et al's No. 1 Olsen, NW SW SE Sec. 10-15-4w .. Spudding.
Templeman's No. 1 Lanbengager, C SW Sec. 20-15-5w .. Drlg. 1,750 ft.
Kinney-Coastal's No. 1 Hughes, NW NE NW Sec. 20-13-4w ..... Shut down 50 ft.
Dixie Oil Co.'s No. 1 Muir, C SW SE Sec. 6-15-2w ..... Drlg. 3,126 ft.
Boyle et al's No. 1 Miller, SW cor. SE Sec. 21-16-1w .... 5-in. csg. 3,250 ft.
Kenney-Coastal Oil Co.'s No. 1 Beal, C NW Sec. 23-14-5w ..... Shut down 4,005 ft.

SEDGWICK COUNTY

Fleeger D. F.'s No. 1 Ottaway, C SW NW Sec 16-28-2w .. Rig.
C. B. Davis' No. 1 Kinkead, NE cor. Sec. 14-27-1 ..... Drlg. 1,400 ft.
Marland and Amerada's No. 1 Sensroth, NW cor. Sec. 25-28-4w ..... Drlg. 445 ft.
Boyle's No. 1 Sandusky, NW NE SE Sec. 34-26-1w .... Drlg. 1,163 ft.
Lario O. & G. Co.'s No. 1 Calkins, SW cor. SE Sec. 7-27-2e ..... Drlg. 2,635 ft.
E. W. Marland's No. 1 Huggins, SE NW SW Sec. 30-27-2 ..... Drlg. 1,490 ft.
Johnson & Marshall's No. 1 Roy, NE cor. SE SW Sec. 23-29-1w ..... Underreaming 3,015 ft.
Lario O. & G. Co.'s No. 1 Teachorff, NE cor. SW Sec. 27-29-1w ..... Drlg. 2,570 ft.
Kyle et al's No. 1 Finney, SW NW SE Sec. 29-28-1w .... Shut down 50 ft.
Simmons & Canary's No. 1 Scott, NE NW NE Sec. 22-26-1e ..... Drlg. 3,504 ft.
T. B. Slick's No. 1 Rosenhagen, SW SE NE Sec. 33-27-4w ..... Drlg. 4,250 ft.
Hammond & Stout's No. 1 Roeder, SW NW Sec. 23-27-2w ..... Drlg. 3,795 ft.
Twist et al's No. 1 Armstrong, NE NW Sec. 28-26-1e .... Rig; spud.; shut down.
Shawver et al's No. 1 Scott, SE cor. SW SW Sec. 10-28-1e ..... Hole full water 3,461-64 ft.; tota depth 3,555 ft.; abandoned.
Barnett O. & G. Co.'s No. 1 Davidson, NW cor. NW SW Sec. 27-26-1e ..... Shut down 2,668 ft.
Kellar & Lewis' No. 1 Buckles, NW cor. SE Sec. 3-28-1w .. Fishing 975 ft.
Twist et al's No. 1 Joseph, CNL SW SE Sec. 4-25-1w .... Shut down 1,980 ft.
Miller Wentz' No. 1 Shaffer, NE cor. NW Sec. 9-27-2w .... Fishing 3,815 ft.
Washabaugh et al's No. 1 Harrison, NW cor. NE NE Sec. 3-26-2w ..... Drlg. 2,485 ft.
LaFont et al's No. 1 Carlton, C SE SE SW Sec. 24-28-1e .. Shut down 1,685 ft.

SHERMAN COUNTY

A. L. Henson et al's No. 1 Murry, NE cor. SE NW Sec. 22-7-40w ..... Shut down 3,035 ft.

STEVENS COUNTY

Trees Oil Co.'s No. 1 Thompson, C NE SW Sec. 3-35-38w .. Shut down 500 ft.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16-34-38w ..... Shut down 1,320 ft.

SMITH COUNTY

Phillips Pet.'s No. 1 Clydesdale, SE NW Sec. 23-5-14w .... Drlg. 1,725 ft.

SUMNER COUNTY

E. K. Carey & Larado Oil Co.'s No. 1 Welsch, SW SE Sec. 9-34-1e ..... Drlg. 1,500 ft.
Mid-Continent Pet. Corp.'s No. 1 Clark, SE cor. Sec. 31-34-3w ..... Drlg. 2,670 ft.
Shell Pet. Corp.'s No. 1 Armstrong, NE cor. Sec. 12-33-1e. Rigging up.
Gypsy & Blankenship's No. 1 Robeck, C SW SW Sec. 27-34-4w ..... Drlg. 4,764 ft.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w ..... Rig.

TREGO COUNTY

Phillips Pet. Co.'s No. 1 Spitz, SE cor. Sec. 24-12-25w .... Rig on ground.
Mid-Kansas' No. 1 Ridgeway, NE SW Sec. 28-12-21w .... Drlg. 950 ft.
Day et al's No. 1 Gugler, SW NE NE Sec. 26-12-21w .... Shut down 50 ft.
Day et al's No. 1 Unknown, NE NW SW Sec. 2-11-21w .... Drlg. 2,667 ft.

WASHINGTON COUNTY

McCool & Vincent's No. 1 Linn, NW cor. NE Sec. 27-4-3 .. Drlg. 2,300 ft.

WALLACE COUNTY

Morton & Entyre's No. 1 Parker, SE cor. NW SW Sec. 20-13-41w ..... Rig.

WILDCAT OPERATIONS IN NEBRASKA

FRANKLIN COUNTY

U. R. Drlg. Co.'s No. 1 Brunkle (twin well), C NW SW NE Sec. 2-3n-13w ..... Rig.

CHASE COUNTY

Chase Pet. Co.'s No. 1 Ingold, C NE Sec. 24-6n-38w .... Total depth 4,050 ft.; cementin 6-in. csg.

FURNAS COUNTY

Southwestern Pet. Corp. of Nebraska's No. 1 Montague, SE SW SW Sec. 28-1n-22w ..... Drlg 1,750 ft.
Graham Bros.' No. 1 Edwards, NW SW Sec. 13-2n-22w .. Shut down 3,150 ft.

WEBSTER COUNTY

Mid-States Exploration Co.'s No. 1 Platt, C SE one-half Section 3-1n-11w ..... Shut down 555 ft.

CHECK EFFICIENCY OF GASOLINE ABSORBER

(Continued from Page 46)

The mean recoveries and efficiencies are:

	Calculated	Actual	Effy.
Propane	22%	28	129
Isobutane	57	49	86
Normal butane	84	70	83
Pentane plus	92	92	92

The 129 per cent comes with a shock and has caused some lively argument as to whether we could have an efficiency of over 100 per cent, or in other words, whether the oil could leave the absorber superheated with one component. We believe that it can and offer the following argument: In the upper trays the oil is saturated with the lighter fractions until its total vapor pressure is equal to the working pressure. As it travels downward, these must be driven off and replaced by heavier fractions. If our trays were 100 per cent perfect as fractionators the replacement would be complete and the oil would leave the absorber exactly in equilibrium with the entering gas. Since, however, our absorber is not efficient as a fractionator, the excess propane is not driven off but leaves in the fat oil. It is quite possible that much of the light fractions are forced out of solution but mechanically entrained in the form of very fine bubbles which do not have time to separate out from the oil.

Series of Tests

In an endeavor to find out what happens at different levels of an absorber, a series of tests were made upon one absorber taking samples of both oil and gas over the odd numbered trays from 1 to 15, numbering up from the bottom. The results are tabulated in Table 6 and are charted in Figures 5 to 9. Figure 5 shows per cent of each fraction absorbed. In Figure 6 partial pressures in oil and gas are compared for isobutane, normal butane and the pentanes combined. The full lines indicate partial pressures in the oil; dotted lines in the gas. Figure 7 shows the same for ethane and propane and Figure 8 for methane. The temperature gradient is indicated in Figure 9. These curves are very interesting but not very conclusive. There is general conformity between the gas and oil pressures but some very confusing crossing of the lines.

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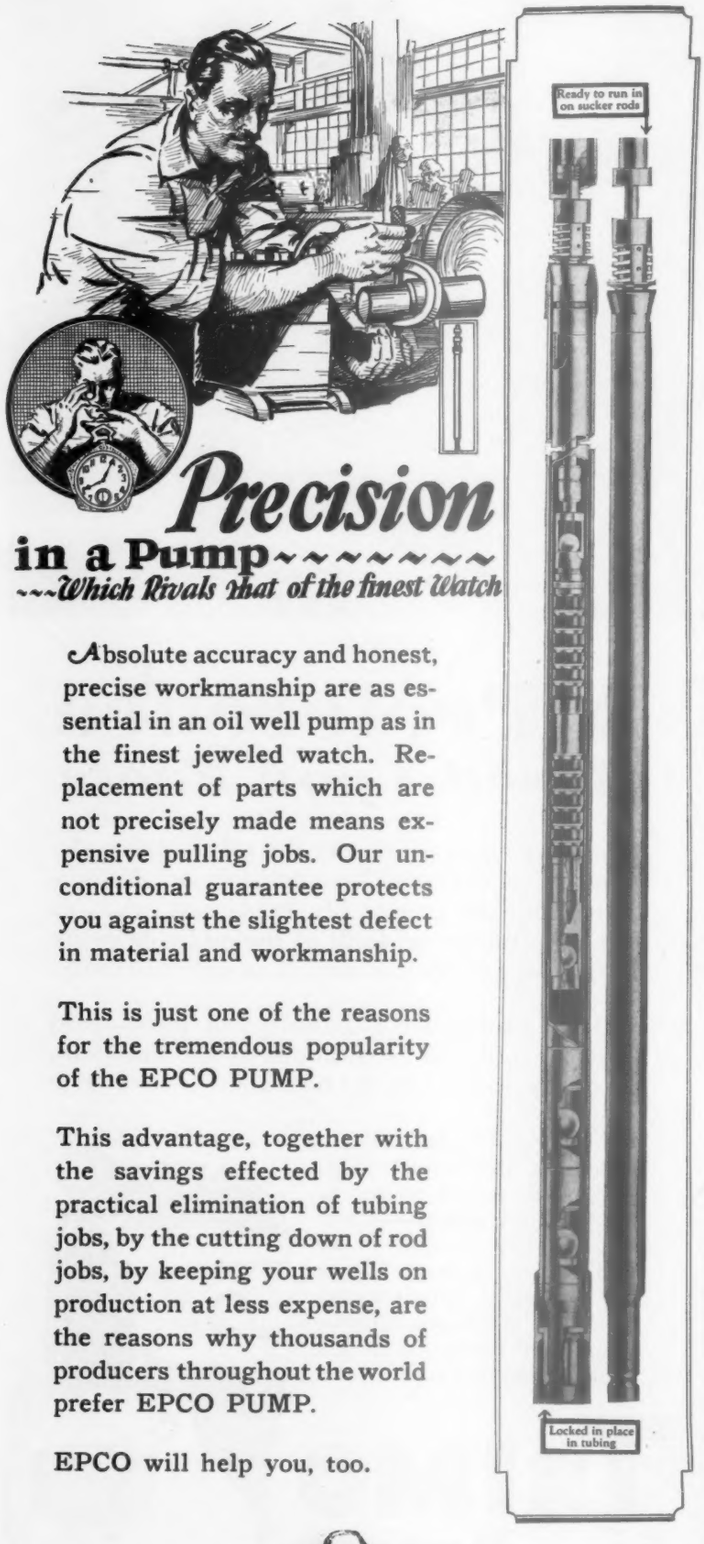

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These seem to indicate unstable equilibrium and surging or oscillation. We can find no reason for the rapid change which takes place at about the center of the column, unless it is due to a change in the composition of the gas which was occurring at about the time the samples were taken.

Several years ago—before the days of fundamental analyses—a similar test was run upon an absorber by taking samples of oil at different trays, running Englers upon them and plotting the percentages given off at different temperatures against tray number. This showed a rapid absorption at top and bottom for all fractions.

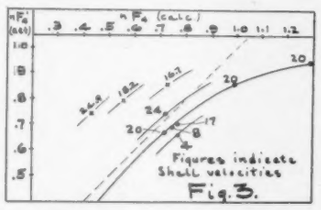

Fig. 3.

The light fractions remained nearly constant in the intermediate trays, only the heaviest showing gradual absorption throughout. This seems quite different from the present case and also suggests that the composition of the gas may have been changing.

Recovery of Butane

Returning to the main test, we may say that the recovery of normal butane is the most important function of an absorber. We do not want the lighter fractions and their absorption may be looked upon as a necessary evil, while the fractions heavier than butane take care of themselves. That is to say, if we choose an oil rate that will absorb substantially all the normal butane we require, it will be ample to recover the pentane and heavier fractions. The most important condition necessary to recover all the pentane plus, seems to be a good tripping of the lean oil. This is shown quite clearly in Figure 4 where actual recovery of pentane plus is plotted against vapor pressure of the lean oil in m.m. Hg. at 80 degrees Fahrenheit. No complete re-

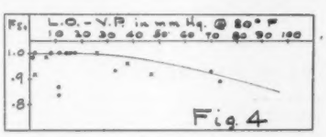
Fig. 4

covery of pentane plus is recorded for a vapor pressure of over 27 m.m. and all but one fall under 20 m.m. It would also seem that there is no advantage in stripping down to 1 or 2 m.m. If we cannot recover all of this fraction with 20 m.m. oil, the fault probably lies in the absorber. Pentane recovery was also plotted against saturation at 375 degrees and butane recovery against saturation at 375 degrees and against vapor pressure. Neither of these showed any clear indication.

In Figure 1 actual versus calculated recoveries of normal butane are plotted, the questionable points being marked with a cross. Even disregarding these, the points are pretty well scattered, showing a wide divergence in efficiency for different absorbers. However, the average is clearly enough defined to conclude that with the common absorber a recovery of 80 to 85 per cent of the normal butane is all that can be expected, no matter how high the oil to gas ratio is carried. A high calculated recovery is due to a high oil to gas ratio and the results do not seem to justify this. The highest efficiencies are shown where the calculated recovery runs from .40 to .80. Eight tests show efficiencies ranging from 102 to 171 per cent for normal butane. Making all allowances for uncertainty of analysis, it seems demonstrated that the fat oil may be supersaturated for normal butane as well as for isobutane and propane. As shown in Figure 5, most of the pentane is absorbed in the bottom tray. If it does not drive off the surplus butane here it will remain in the oil. Even if forced out of solution it might be retained as very fine bubbles mechanically entrained. Even if the oil were supersaturated for all the components from ethane up, its total vapor pressures could still be well within the working pressure. According to the tray to tray tests (Table 4) methane makes up 76 to 92 per cent of the total pressure of the oil, assuming that this is the working pressure. Unfortunately, we cannot calculate the partial pressure of the absorbed methane, without extrapolating its vapor pressure curve far beyond the critical point.

High Absorption Efficiencies

As to the cause of high absorption efficiencies, and how they may be attained, we were not able to discover anything definite. Butane efficiency was plotted against everything we could think of without results. The nearest to a definite relation was found between recovery and shell velocity, and this only for a definite absorber. Different oil and gas rates were run upon one absorber and the results plotted in Figure 3. Keeping the shell velocity at 20 feet per minute and varying the oil rate gave three points upon which the general curve is drawn. You will note that this conforms quite

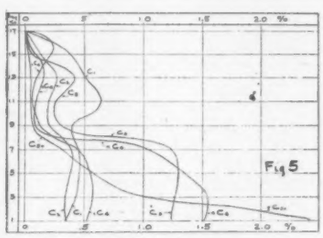
Fig 5

well with the curve in Figure 1. If parallel curves are drawn through the 4-foot and 24-foot points they indicate a small but consistent increase in efficiency. The 8-foot and 17-foot points are a little off. On one other absorber we have three tests, Nos. 11, 19 and 44. In fact No. 44 was run because we questioned the high efficiencies shown in Nos. 11 and 19. No. 44 was run very carefully and the results closely checked. It shows a still higher efficiency, 171 per cent, and we could find no reason to question the result. These three points are also plotted upon Figure 3 (marked with crosses) and show a general, though not regular, increase of efficiency with velocity. We tried marking in the velocities in a plot like Figure 1 and also plotting efficiency versus velocity for all the tests, but without result. The effect of velocity was entirely masked by other and unknown factors, principally, no doubt, the intrinsic efficiency of the absorber.

Types of Absorber

As to type of absorber, no difference is noted between perforated plates and bubble caps. One of each type is represented in the two highest tests, each 171 per cent. Both types are also represented in the lowest efficiencies. Of the two

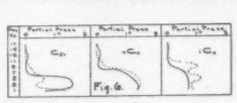
Fig. 6.

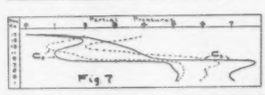
Fig 7

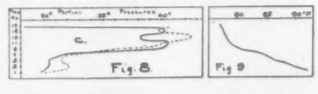
Fig. 8 Fig 9

highest efficiencies, in one case the gravity of the oil was 34.8 degrees A.P.I. The lowest gravity reported was 34.3. In the other case it was 43 degrees A. P.I., the highest gravity reported.

Assuming that the essential validity of the formula (Equation 3) has been verified by the tests, but that the effect of minor factors such as molecular weight and total absorption may be obscured by other factors, we tried a simplified for-

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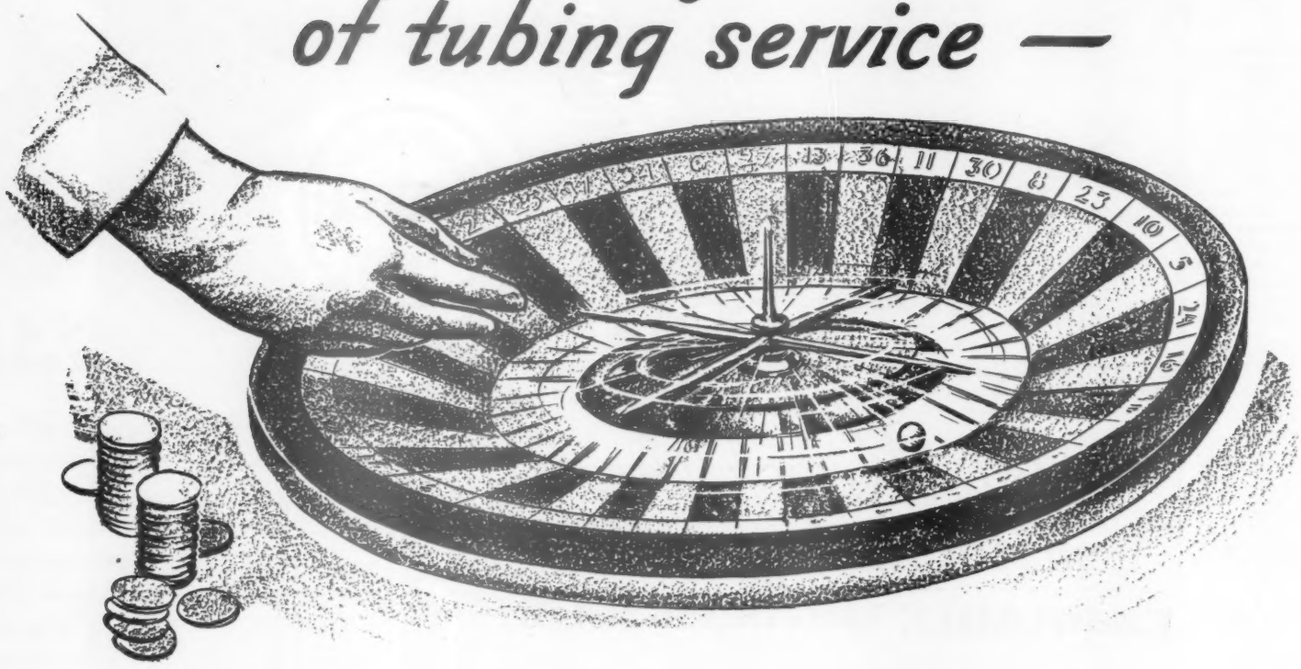
Monarch of the highways . . . . SUPER-GAS is a pure petroleum product, containing nothing harmful, but scientifically refined for full power performance from modern high compression engines. Gives quick, smooth and dependable acceleration at all speeds, clean and complete consumption. The gasoline of maximum power at minimum cost per mile.
* In 1860, almost 70 years ago, William Barnsdall, father of T. N. Barnsdall, the founder of BARNSDALL, established the world's first oil refinery.
BARNSDALL
The World's FIRST* Refiner
Refineries: BARNSDALL - OKMULGEE - WICHITA Sales Offices: CHICAGO - TULSA - NEW YORK - ST. LOUIS - KANSAS CITY - ST. PAUL - LOS ANGELES

WROUGHT IRON

takes the gamble out of tubing service —



YOU don't take any chance when you specify genuine wrought iron tubing of BYERS make, because wrought iron has long demonstrated its ability to give two to five times greater service than ordinary pipe material. A large number of service records in oil fields everywhere conclusively demonstrate the superior qualities of corrosion resistance displayed by BYERS Tubing.

Why gamble with cheaper material? Why risk expensive interruptions and delays, due to premature tubing failures? Insist on genuine BYERS. It will keep faith with you as it is now doing with hundreds of others.

A. M. BYERS COMPANY
Established 1864 Pittsburgh, Pa.

DISTRIBUTORS
International Supply Co. Jarecki Mfg. Co.
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BYERS
Galvanized
TUBING
BYERS
GENUINE WROUGHT IRON

mula. Taking Equation 8 obtained by assuming that AG_a/m_a bears a constant relation to R_oC_o/m_o, and substituting the mean values,

$$m_o/G_o = 225 \text{ and } {}_nF_4' = .84\,{}_nF_4,$$

we have

$${}_nF_4' = \frac{.84 \times 3.55 R_o P}{225\,{}_nP_4} = \frac{.0133 R_o P}{{}_nP_4} \quad (9)$$

To verify this, ${}_nF_4'$ was plotted against R_oP as shown in Figure 2, all questionable points were omitted which fell outside the dotted boundary lines. Among these were tests Nos. 34 and 44 which we felt belonged to a different class. These can be divided into two groups by another dotted line through the center. Collecting the tests according to this grouping they are tabulated separately in Tables 4 and 5. The mean temperatures are respectively 81.5 and 94.5 degrees Fahrenheit. The corresponding pressures for normal butane are 38 and 47 pounds. Hence the coefficients for the two groups are

$$\frac{.764 \times 38}{2167} = .01340 \text{ and } \frac{.611 \times 47}{2240} = .01282$$

respectively. This checks very well with .0133 in Equation 9 and fully justifies the inclusion of p_n in the formula. In general p_n may be obtained by assuming a 16-degree rise in oil temperatures.

For average conditions we believe the simplified formula is quite accurate enough to calculate the oil to gas ratio required to absorb all the normal butane the particular type of absorber is capable of recovering. The formula is:

$$R_o = \frac{75\,{}_nP_4}{p} \quad (10)$$

Expressed as a working rule it would be: Calculate or estimate the temperature of the oil leaving the absorber. Take the vapor pressure of normal butane at this temperature, multiply it by 75 and divide by the working pressure (absolute) expressed in the same units.

Nomenclature

A—Total absorption in gallons, per 1,000 cubic feet, wet gas.

A_o—Total absorption in cubic feet, per 1,000 cubic feet, wet gas.

C—Coefficients.

C_1, C_2, C_3, ${}_iC_4$, ${}_nC_4$, C_5^+ — Methane, ethane, propane, isobutane, normal butane and pentane and heavier, called "pentane plus." Same subscripts are used throughout to identify components. In general C_n.

D—Total dry gas in cubic feet.

D_1, D_2, D_3, etc.—Per cent of component in dry gas.

E_3, ${}_iE_4$, ${}_nE_4$, E_5^+—Absorber efficiencies in recovering propane, etc.

F_3, ${}_iF_4$, ${}_nF_4$, F_5^+ — Calculated recovery fraction for propane, etc.

F_3, ${}_iF_4{}^1$—$F_5{}^{1+}$ — Actual recovery fractions.

G_a, G_o—Specific gravities for gasoline absorbed and absorbent oil.

L—Pound mols of total liquid.

L_1, L_2, L_3, etc.—Pound mols of component in liquid.

P — Working pressure in pounds per square inch (absolute).

P_1, P_2, P_3, etc. — Vapor pressures of pure components.

R_o—Oil to gas ratio in gallons per 1,000 standard cubic feet of wet gas.

V—Pound-mols of total gas.

V_1, V_2, V_3—V_n—Pound-mols of components in gas.

W—Total wet gas, cubic feet.

W_1, W_2, W_3, etc.—Per cent of components in wet gas.

x_1, x_2, x_3—x_n—Mol fractions in liquid.

y_1, y_2, y_3—y_n—Mol fractions in gas (taken equivalents to volume fractions).

TABLE 1—PRINCIPAL DATA

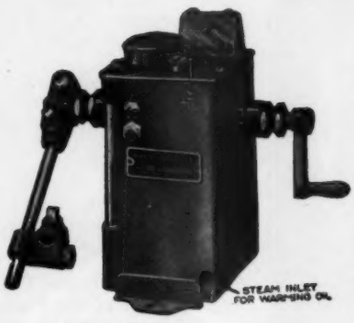
Test No.	Perf. or B.C.	L.O. °A.P.I.	L.O. m/G	L.O. @ 375°	L.O. V.P.	P (abs.) lbs./sq. in.	Top. °F.	Bott. °F.	R_o	Shell veloc.
1	Perf.	39.2	215	....	....	58.7	71	92	40	60.0
2	Perf.	39.2	215	....	....	56.7	77	98	27	59.7
3	Perf.	41.2	187	....	....	52.7	79	96	23	62.7
4	Perf.	40.0	203	....	....	190.0	60	98	10.1	35.5
5	Perf.	38.5	226	....	....	48.7	63	80	37.4	4.0
6	Perf.	38.5	226	....	....	47.7	66	76	37.7	8.2
7	Perf.	38.5	226	....	....	47.7	65	80	37.4	16.6
8	Perf.	38.5	226	....	11.0	47.7	66	82	37.0	24.2
9	Perf.	38.5	226	....	11.0	44.7	68	81	55.5	14.8
10	B.C.	38.5	226	....	11.0	45.7	69	83.5	52.2	24.9
11	Perf.	34.6	283	....	....	54.7	80	98	37.0	18.2
12	Perf.	37.7	238	....	....	51.7	84	90	37.0	16.9
13	Perf.	39.0	219	2.50	70.0	46.7	74	92	46.0	19.5
15	Perf.	38.8	222	1.70	33.0	63.7	82	96	35.0	27.7
17	Perf.	37.2	245	.94	47.0	51.7	94	98	79.0	24.8
18	Perf.	40.8	192	.67	73.0	54.7	82	90	47.0	32.2
19	Perf.	35.6	269	3.00	38.0	52.7	83	101	55.0	16.7
20	Perf.	35.2	274	.47	17.0	51.7	73	77	52.0	25.3
21	B.C.	36.0	263	2.80	168.0	315.0	79	106	12.0	19.8
22	Perf.	38.0	233	.22	1.0	47.7	69	83	50.1	51.3
23	B.C.	38.9	204	3.38	14.0	70.7	70	101	22.7	48.3
24	B.C.	38.6	204	3.50	17.0	72.7	69	102	20.9	56.0
25	Perf.	38.7	200	.96	16.0	52.7	80	84	48.3	16.3
26	Perf.	36.6	197	1.27	26.0	57.7	73	82	30.4	27.1
27	Perf.	39.0	219	4.00	....	44.7	75	85	74.0	38.3
28	Perf.	37.0	248	2.00	....	42.7	71	81	67.8	14.0
29	Perf.	36.0	263	1.50	....	43.7	76	82	49.4	26.1
30	B.C.	41.5	189	....	2.0	74.7	64	120	34.7	21.6
31	B.C.	35.2	209	....	2.0	72.7	64	86	35.7	18.4
32	Perf.	34.3	213	....	8.5	106.7	79	97	29.5	17.0
33	Perf.	35.3	208	....	10.0	335.0	69	76	3.0	26.9
34	B.C.	43.0	182	....	6.0	72.7	68	113	21.1	29.3
35	Perf.	39.6	...	....	....	365.0	65	63	5.0	14.8
36	Perf.	39.4	...	....	....	365.0	55	58	3.8	16.5
37	Perf.	34.7	211	1.10	....	42.7	80	98	35.9	27.1
38	Perf.	35.1	210	.78	....	44.7	59	73	51.5	15.8
39	Perf.	34.4	212	.90	....	41.7	70	84	67.5	49.8
40	Perf.	34.8	210	.73	....	54.7	75	83	28.2	30.0
41	Perf.	36.7	241	....	....	49.7	64	81.5	38.5	20.4
42	Perf.	36.7	241	....	....	49.2	70	84	54.4	20.6
43	Perf.	36.7	241	....	....	49.2	74	85	72.4	20.6
44	Perf.	34.8	265	2.17	1.9	53.7	80	100	31.4	24.9
45	Perf.	34.8	265	2.17	1.9	53.7	80	96	36.3	17.6
Mean		39.9	226	1.75	26.6	84.9	72.4	88.6	38.8	27.0

TABLE 2—GAS ANALYSES

Test No.	Wet gas CH_4	C_2H_6	C_3H_8	iC_4H_{10}	nC_4H_{10}	C_5H_{12}+	Dry gas CH_4	C_2H_6	C_3H_8	iC_4H_{10}	nC_4H_{10}	C_5H_{12}+
1	85.30	1.60	6.80	1.50	1.40	3.40	92.10	1.90	4.50	0.60	0.70	0.20
2	84.50	2.80	4.80	1.10	1.40	2.30	94.50	0.90	2.60	0.90	0.90	0.20
3	79.60	6.00	7.00	2.10	2.40	1.10	85.00	5.30	5.80	1.00	1.60	0.10
4	90.20	1.80	4.30	0.90	1.20	1.60	96.10	0.70	0.70	1.80	0.70	0.00
5	77.61	8.67	7.48	1.35	2.35	2.54	82.97	6.95	8.45	0.77	0.86	0.00
6	77.73	8.85	7.39	1.05	2.56	2.42	82.42	8.76	6.56	0.85	0.85	0.56
7	76.12	9.11	7.03	1.52	2.30	3.92	82.56	8.97	6.49	0.76	0.74	0.48
8	75.76	9.62	7.91	1.48	2.46	2.77	81.52	9.70	6.76	0.84	0.69	0.49
9	76.44	9.60	7.70	1.52	2.35	2.39	85.85	7.31	5.95	0.77	0.12	0.00
10	75.53	9.38	8.18	1.23	3.08	2.60	82.21	9.15	6.75	0.74	0.77	0.38
11	71.00	8.00	9.10	2.50	3.30	3.90	82.40	8.00	6.30	0.70	0.80	0.30
12	82.70	4.70	5.60	1.20	2.40	3.10	86.80	4.50	6.00	1.90	1.20	0.20
13	74.90	5.40	9.60	2.50	3.30	3.70	81.70	7.30	7.60	1.20	1.40	0.30
15	78.70	5.30	7.10	1.40	2.50	2.70	84.70	5.60	5.90	0.60	0.70	0.20
17	81.90	6.40	5.00	1.30	2.10	2.50	87.90	4.10	5.40	0.90	1.20	0.20
18	78.50	7.00	6.60	1.30	2.50	2.60	82.80	7.30	5.30	0.70	0.80	0.30
19	70.00	5.90	5.70	2.30	3.10	9.90	76.70	10.50	8.80	1.10	0.50	0.40
20	79.60	1.60	4.50	1.90	2.80	2.90	79.60	7.60	5.10	0.60	0.00	0.00
21	81.90	6.33	4.82	1.16	2.13	3.65	88.15	6.06	4.48	0.57	0.42	0.32
22	78.71	7.82	6.59	1.07	2.74	3.07	84.75	8.42	5.46	0.60	0.71	0.06
23	80.74	8.58	4.98	1.01	1.87	2.82	86.56	7.09	4.35	0.95	1.05	0.00
24	80.69	8.14	5.23	0.93	1.99	3.02	85.75	7.65	4.59	0.83	1.18	0.00
25	87.82	3.92	4.03	0.73	1.75	1.75	93.66	2.54	3.16	0.39	0.25	0.00
26	86.97	4.33	3.99	0.89	1.66	2.16	92.72	3.52	3.12	0.64	0.00	0.00

(Continued on Page 105)

You Need This Lubricator On Your Drilling Engine



It supplies clean, fresh oil to the engine cylinder regularly and in just the right quantity to give efficient lubrication.

Starting the moment the engine starts, it speeds up, slows down and stops with it, always supplying oil in proportion to the engine's speed.

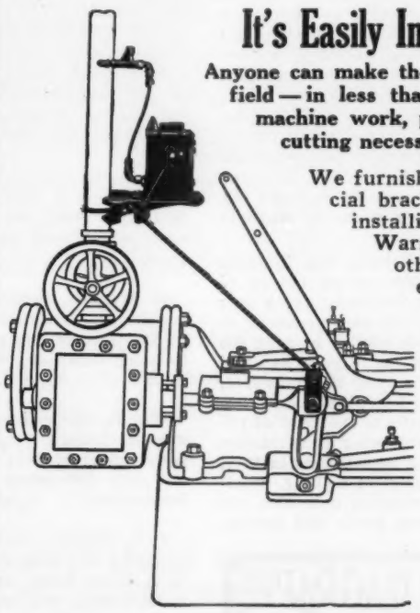
Day or night—winter or summer—it's on the job every minute, requiring no attention, never forgetting, never falling asleep.

The "Manzel" Force Feed Lubricator

Lubricates drilling engines, mudhogs, air and gas compressors, pumps, etc., automatically and efficiently, using 30 to 60% less oil than ordinary lubricators.

You can't waste oil with it and after it is installed you can forget all about your engine lubrication, for the "Manzel" will see to it that the cylinder is lubricated and lubricated right.

The most inexperienced helper can take care of it, for after the supply is once adjusted to suit your engine, there is nothing to do except to keep the reservoir supplied with oil.



It's Easily Installed, Too!

Anyone can make the installation — in the field — in less than half an hour. No machine work, pipe fitting or thread cutting necessary.

We furnish (when desired) special brackets and fittings for installing on Oil Well, Ajax, Warren, Acme, Lucey or other drilling engines, either single or twin type. In less than thirty minutes after you receive the "Manzel" Lubricator, it can be installed on your engine and your lubrication troubles will be over.

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MEN KNOWN IN OILDOM

M. E. Wilson

M. E. Wilson, head of the producing department of the Louisiana Oil Refining Corporation for several years, resigned early in 1929 to join the Lion Oil Refining Company of El Dorado, Ark., as vice president in charge of all producing, pipe line and land department activities of the company.

Mr. Wilson was born in Iowa and had a farm boy's life—up before day, down after dark; plowing, milking, building fences, threshing; playing when he got the chance. After attending grammar schools in Sheldon, Des Moines and Rock Rapids, he entered Iowa State University when he was 16 and "played his way through with his cornet." Where and how he acquired the instrument and learned to play it isn't of record, but it was a mighty aid in getting his degree of bachelor of science and later the postgraduate master of science.

Then he became an instructor in the geological department of Washington University, St. Louis, and during vacations served with the state geological survey. From Washington he moved to the Rolla (Mo.) School of Mines and for four years was assistant state geologist. He wrote several technical works and was engaged as consulting geologist for various companies in research work in Missouri and Kansas.

Mr. Wilson joined the Louisiana Oil Refining Corporation in November, 1919, taking charge of geological work in Texas and Oklahoma and a year later was made assistant to the vice president in charge of operations in those States, opening his office in Shreveport, La., the next year as chief geologist and later assistant to the vice president, C. M. Bennett, in the producing department. The next year, 1923, he was elevated to the head of the producing department and following consolidation of the pipe line and producing departments in May, 1928, managed both, supervising all drilling, scouting, pipe line, land and geological activities. He still finds time for his hobbies, music and fishing.

PERSONAL PARAGRAPHS

Mr. and Mrs. David Matheson and children have returned from Petrolia, Ontario, to the Colombia fields.

* * *

Frank Kacher left recently via New York for the Trinidad fields, after a few months' furlough in Petrolia, Ontario.

* * *

C. R. Minor, vice president of the Gulf Refining Company, of Shreveport, La., is enjoying a vacation in Honolulu.

C. R. S. Snyders, of the Shell Petroleum Corporation, is visiting Mid-Continent fields at this time. His home address is The Hague, Holland.

* * *

George F. Gregory has returned to Petrolia from the Rainy River district of northern Ontario, where he has been drilling for the past two months.

* * *

Joe O'Donnell, of the Midwest Refining Company, formerly in Salt Creek Field, visited Casper, Wyo., friends on route from New Mexico to Montana.

* * *

J. E. Shatford, president and general manager of the Ouachita Valley Refining Company, at El Dorado, Ark., is spending a month's vacation in Chicago.

* * *

W. C. Frizzell, superintendent of the Macmillan Petroleum Products Company's El Dorado, Ark., plant, is spending his two weeks' vacation in Los Angeles, Calif.

* * *

Miss Louise Pilcher, office assistant to the chief scout of the Pure Oil Company, Fort Worth, Tex., is spending a vacation in Fayetteville and other parts of Arkansas.

* * *

O. B. Bingham, superintendent of the Simms Oil Company's refinery at Smackover, Ark., has been transferred temporarily to Chicago for the next three or four months.

* * *

A. J. Becker, superintendent of production for the Gypsy Oil Company, Eldorado, Kans., Mrs. Becker and their three children, are spending vacations at Colorado resorts.

* * *

William Christiana, of the land department, and R. S. Shannon of the production department of the Continental Oil Company, of Denver, Colo., were recent visitors to Casper, Wyo.

* * *

E. R. Lederer, of the Texas Pacific Coal & Oil Company, Fort Worth, Tex., is spending his vacation in California. The trip was made with T. T. Pendleton in the latter's new monoplane.

* * *

Bob Lipscomb, land man with the Tidal Oil Company, formerly stationed at Wichita Falls, Tex., has been transferred to Corsicana, Tex., where the company is opening an office. He will be in charge there.

* * *

Earl Bemis, associated with The Texas Company refinery at Casper, Wyo., and Miss Hazel M. Devine of Craig, Colo., were married in Craig and have been on a honeymoon trip through Wyoming.

* * *

Burke H. Sinclair, general manager of Hughes Oil Company at Billings, Mont., was a recent visitor in Casper, Wyo. He was formerly director of industrial relations for the Midwest Refining Company.

* * *

H. W. Bell, formerly head of the research and engineering department of the Pure Oil Company, at Chicago, has joined the staff of the Lion Oil Refining Company, of El Dorado, Ark., in the same capacity.

* * *

William M. Lourcey, land man for the Gulf Production Company, Fort Worth, Tex., and Miss Margorie Colvin of Fort Worth, were recently married and left for points in California on a month's honeymoon.

* * *

F. E. Hadden, chief accountant of the California Company, at Dallas, Tex., has returned from the West Texas fields, and is now spending a vacation in California with his family. They made the trip by automobile.

* * *

C. M. Schneidau, formerly with the Mason Regulator Company, at Boston, Mass., is now in charge of the Forth Worth, Tex., offices of the Moorlane Company, of Tulsa, district distributors in the Mid-Continent.

* * *

H. B. Soyster, supervisor of the Oklahoma division of the United States Geological Survey, has returned to Muskogee, Okla., after spending some time in Michigan, assisting the state authorities there in perfecting a state oil and gas conservation system.

A. W. Peake, vice president of the Dixie Oil Company, at Shreveport, La., spent the week in Denver, Colo., and Chicago, on business.

* * *

E. J. Pitre and B. C. Selden, scouts for the Pure Oil Company, have been transferred to the Houston, Tex., office in the land department. Mr. Pitre scouted out of Baton Rouge, La., and Mr. Selden out of Beaumont, Tex.

* * *

George Calleya, petroleum engineer of the Mining Bureau of Rumania, who has been in Los Angeles, Calif., studying various aspects of oil production, has completed his investigations and is about to return to his own country.

* * *

O. L. Caro, assistant sales manager of the Crystal Oil Refining Corporation, at Shreveport, La., has resigned to join the Burford Oil Company, of Pecos, Tex., and moved to Minneapolis, Minn., where he will be district representative.

* * *

C. A. Olson, who has been the refinery engineer of the industrial division of the American Radiator Company for the past 10 years, has resigned his position as of August 15 to confine his efforts to a study of the problems of the petroleum industry.

* * *

Courtney B. Davis, Wichita, Kans., oil operator, is spending a few weeks in Mexico. He writes that the weather in Tia Juana, Mexico, is fine and that the dogs are running. He made the trip to the West Coast in a passenger plane.

* * *

B. C. Clardy, former proration umpire of the Yates Pool, Pecos County, Texas, is now in charge of the crude oil purchasing department of the Shell Petroleum Corporation at Dallas, Tex., having supervision over the central and Gulf division.

* * *

It is reported that the condition of George C. Pohler, purchaser for the Mid-Continent Petroleum Corporation, is somewhat improved, but his family is still with him at the sanitarium near Marion, Ohio, where he was taken from Battle Creek, Mich.

* * *

J. J. Mason, land man for The Texas Company, of Shreveport, La., has moved his wife and little daughter into Meridian, Miss., where he is making headquarters along with B. E. Bremer, resident geologist in Mississippi and Alabama for the same company.

* * *

Jack Doyle, scout and land man for the Humble Oil & Refining Company in the Shreveport, La., division, has been transferred to Beaumont, Tex., since the Humble company closed out in Shreveport, and will take up similar duties at his new headquarters.

* * *

Joe B. Hurley, oil operator of El Dorado, Ark., accompanied by W. M. Redditt, Shreveport, La., formerly with the land department of The Texas Company, but now independent, are in Meridian, Miss., for an indefinite stay while watching developments at the Lackey and Houser wells.

* * *

Charles L. Morgan, attorney for oil and gas companies in Fort Worth, Tex., has bought a Ryan brougham six-place cabin plane, which he will use to reach outlying oil territory. The plane, which Mr. Morgan himself will pilot, will be equipped with a typewriter and other office paraphernalia.

* * *

Walter O'Roark, scout for the Standard Oil Company at Shreveport, La., W. C. Leisk, Shreveport-El Dorado Pipe Line Company's scout at El Dorado, Ark., and Jack Doyle, of the Humble Oil & Refining Company's Shreveport office, attended the Fort Worth, Tex., meeting of the committee charged with arranging details of the merger of the Mid-Continent and National Oil Scouts organizations last week.

* * *

John Thomson Hayward, for 19 years engineer for the Phoenix Oil & Transport Company, with headquarters at Ploesti, Rumania, has recently returned to the United States to make his residence in Tulsa where he is opening an office as consulting petroleum engineer. Mr. Hayward was in this country on a visit about 18 months ago and at that time decided on this change. His Tulsa office will be in the Cosden Building.

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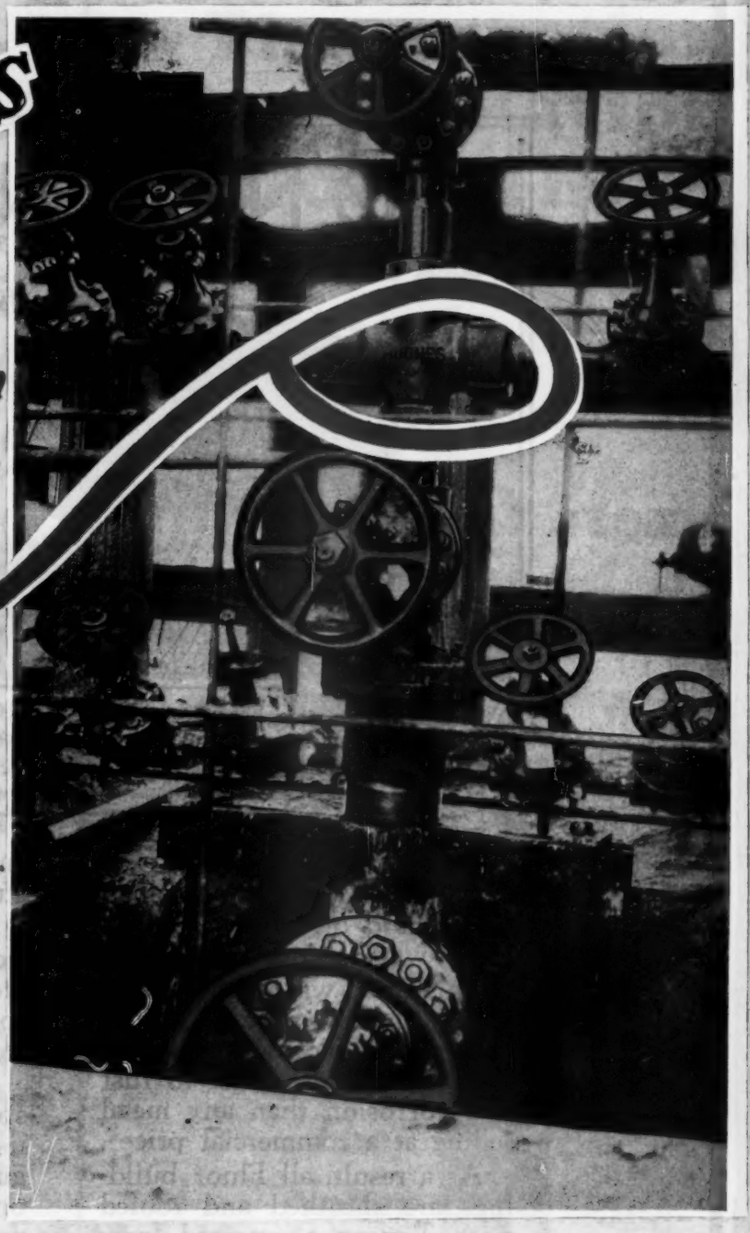
this name is better than a written guarantee for safe and Economical PERFORMANCE



The highest quality of material obtainable, careful workmanship, special heat treatment, and complete testing of the finished product, give to Hughes Valves and Fittings qualities for safe and economical performance that have made them leaders throughout the industry.

Hughes Valves and Fittings have proven their superiority under extreme pressures and unusually difficult working conditions.

The photograph above is of a complete Christmas Tree with Hughes Valves and Fittings on the Sun Oil Company's Rea No. 1, Refugio, Texas. Pressure was 1400 pounds—BUT NOT A LEAK.

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Fluor Compressor Plant and Cooling Tower installed for one of California's largest oil-producing companies.

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This policy was adopted "only after exhaustive tests which proved that Toncan Iron provides greater resistance to rust and corrosion than any metal selling at a commercial price".

As a result, all Fluor buildings are sheathed and roofed with Toncan corrugated Iron, and large quantities of Toncan Iron bolts, nuts, rivets, washers and pipe are used in all construction work.

Toncan is a highly refined iron, alloyed with copper and molybdenum to increase its corrosion resistance, and add years to its life.

When you build, or buy, specify that Toncan Iron be used for roofing, siding, piping, gutters, downspouts, etc. Insist on the use of this iron which provides the "highest corrosion resistance of any metal selling at a commercial price".

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TABLE 2 (Continued)
(Continued from Page 101)

Test No.	A m_a/G_a	Calc. recovery F_3	Calc. recovery iF_4	Calc. recovery nF_4	Actual recovery F'_3	Actual recovery iF'_4	Actual recovery nF'_4	Absorption efficiencies E_3	Absorption efficiencies iE_4	Absorption efficiencies nE_4	Absorption efficiencies E_{3+}
27	80.30	6.84	5.72	0.85	2.40	3.89	83.29	8.02	6.49	1.29	0.91	0.00
28	82.04	7.38	5.17	0.95	1.81	2.65	84.10	8.94	5.66	1.30	0.00	0.00
29	84.66	6.35	4.49	0.74	1.48	2.28	87.96	6.49	4.30	0.52	0.40	0.33
30	74.64	8.28	7.54	1.55	3.23	4.78	86.05	8.05	5.58	0.27	0.00	0.04
31	64.27	14.32	10.77	2.90	3.83	3.90	81.50	9.51	7.75	0.83	0.41	0.00
32	82.18	3.93	6.71	1.16	3.47	2.55	90.16	3.77	5.13	0.47	0.47	0.00
33	89.00	4.31	5.19	0.66	0.71	0.13	92.44	2.22	4.19	0.50	0.50	0.16
34	79.25	7.30	5.78	1.51	2.51	3.65	87.95	6.07	4.84	0.56	0.35	0.07
35	....	....	....	....	....	....	....	....	....	....	....	....
36	....	....	....	....	....	....	....	....	....	....	....	....
37	74.70	8.00	8.60	1.30	3.40	4.00	78.40	8.10	8.90	1.30	2.70	0.00
38	70.80	5.60	2.90	1.40	1.60	3.70	77.30	5.20	2.60	0.50	0.40	0.00
39	74.60	9.10	7.80	1.60	3.00	3.90	82.40	8.40	6.60	1.30	1.10	0.20
40	86.80	4.30	4.50	0.70	1.80	1.90	91.10	3.40	3.80	0.80	0.70	0.20
41	78.64	7.87	7.59	1.20	2.30	2.40	81.74	9.93	6.79	0.69	0.79	0.06
42	74.83	9.63	8.45	1.59	2.92	2.58	82.53	9.20	7.11	0.71	0.45	0.00
43	74.63	10.00	8.12	1.59	3.08	2.68	84.21	9.23	6.06	0.28	0.22	0.00
44	93.54	0.64	1.71	0.91	1.10	1.90	97.50	1.12	0.57	0.16	0.29	0.16
45	93.54	0.64	1.71	0.91	1.10	1.90	96.76	1.13	0.52	0.52	0.63	0.24
Mean	79.80	6.48	6.22	1.35	2.33	2.97	85.90	6.31	7.74	0.78	0.69	0.16

TABLE 3—CALCULATIONS

Test No.	A m_a/G_a	Calc. recovery F_3	Calc. recovery iF_4	Calc. recovery nF_4	Actual recovery F'_3	Actual recovery iF'_4	Actual recovery nF'_4	Absorption efficiencies E_3	Absorption efficiencies iE_4	Absorption efficiencies nE_4	Absorption efficiencies E_{3+}
1	.022	.23	.59	.85	.388	.633	.635	168	107	63	94
2	.023	.15	.37	.53	.514	.272	.429	343	73	81	92
3	.016	.13	.33	.48	.224	.556	.375	172	168	78	91
4	.018	.22	.57	.82	.847	....	.450	385	....	55	100
5	.019	.20	.52	.77	....	.466	.657	....	90	85	100
6	.018	.21	.54	.75	.162	.142	.687	77	26	91	78
7	.022	.20	.52	.77	.148	.540	.700	74	104	91	89
8	.020	.19	.49	.72	.205	.473	.740	119	96	102	84
9	.029	.26	.70	1.03	.311	.550	.952	120	78	95	100
10	.024	.24	.64	.95	.240	.447	.767	100	70	81	87
11	.030	.15	.39	.56	.415	.760	.790	276	195	141	93
12	.015	.18	.46	.68	....	.208	.524	....	45	77	94
13	.023	.20	.52	.76	.275	.560	.612	137	108	80	93
15*	.021	.20	.51	.74	.200	.586	.731	100	114	98	93
17*	.026	.31	.79	1.14	.102	.352	.467	33	45	47	92
18	.020	.28	.72	1.05	.240	.492	.693	85	68	69	89
19	.024	.20	.51	.73	....	.565	.853	....	111	117	96
20	.024	.25	.67	1.00	....	.704	1.000	....	105	100	100
21	.022	.29	.84	1.20	.134	.542	.815	46	65	81	92
22	.023	.24	.64	.92	.231	.477	.756	96	74	82	98
23	.018	.15	.38	.55	.185	.119	.477	123	31	87	100
24	.016	.14	.36	.51	.174	.160	.442	124	44	87	100
25	.023	.29	.76	1.11	.266	.492	.867	92	65	87	100
26	.019	.21	.56	.82	.267	.325	1.000	127	58	120	100
27	.022	.33	.86	1.26	....	....	.633	....	....	63	100
28	.017	.27	.71	1.04	....	....	1.000	....	....	100	100
29	.014	.19	.50	.73	.080	.324	.743	42	65	102	86
30	.032	.21	.52	.73	.358	.853	1.000	170	163	137	92
31	.043	.31	.82	1.20	.433	.776	.917	140	95	92	100
32	.024	.30	.77	1.11	.392	.629	.876	101	82	88	100
33	.010	.19	.51	.75	.222	.273	.324	117	53	43	0
34	.024	.14	.36	.51	.246	.668	.873	176	186	171	98
35	....	..	..	..	....	....	....	....	....	....	....
36	....	..	..	..	....	....	....	....	....	....	....
37	.014	.14	.35	.55	.015	.046	.244	10	13	44	85
38	.027	.29	.79	1.17	.180	.670	.770	62	85	77	100
39	.029	.30	.80	1.17	.224	.262	.667	78	33	67	95
40	.015	.17	.45	.66	.195	....	.627	115	....	95	90
41	.015	.18	.49	.72	.140	.450	.670	78	92	93	98
42	.026	.26	.67	.99	.237	.597	.860	91	89	87	100
43	.034	.34	.88	1.29	.340	.843	.940	100	96	94	100
44	.013	.12	.30	.43	.679	.835	.745	570	276	171	92
45	.011	.14	.36	.52	.707	.451	.445	502	124	85	88
Mean	.022	.23	.57	.84	.283	.489	.699	147	89	90	92
					Mean F'_n/mean F_n =			129	86	83	..

TABLE 4—FIRST GROUP

Test No.	t°F	R_oP	nF'_4
5	80	1,320	.657
6	76	1,800	.637
7	80	1,790	.700
8	82	1,760	.740
9	81	2,480	.952
10	83	2,380	.767
15	96	2,230	.731
20	77	2,690	1.000
22	83	2,390	.756
25	84	2,550	.867
28	81	2,900	1.000
29	82	2,160	.743
31	86	2,600	.917
33	76	1,000	.324
38	73	2,300	.770
40	83	1,540	.627
41	81	1,920	.670
42	84	2,680	.860
Mean	81.5	2,167	.764

nP_4=38 lbs.
C=.0134

TABLE 5—SECOND GROUP

Test No.	t°F	R_oP	nF'_4
2	98	1,530	.429
3	96	1,220	.375
4	98	1,920	.450
12	90	1,910	.524
13	92	2,150	.612
18	90	2,570	.693
19	101	2,900	.853
23	101	1,600	.447
24	102	1,520	.442
32	97	3,150	.876
39	84	2,810	.667
43	85	3,570	.940
Mean	94.5°F	2,240	.611
Mean of 30	86.7	2,195	.7035

nP_4=47 lbs.
C=.01283

nP_4=41.4 lbs.
C=.01328

$x_n p_n = y_n P$ ..... (1) $\quad x_n = \frac{L_n}{L} \quad y_n = \frac{V_n}{V}$

$\frac{L_n p_n}{L} = \frac{V_n P}{V}$ or $\frac{L_n}{V_n} = \frac{L P}{V p_n}$ ... (2)

$\frac{\text{Oil}}{\text{Gas}} = \frac{R_o(\text{gals.})}{1000\,(\text{cu ft})} \qquad R_o = (\text{gals}) = 8.33 R_o G_o\,(\text{lbs}) = \frac{8.33 R_o G_o}{m_o}(\text{mols})$

$A\,(\text{gals}) = \frac{8.33 G_a}{m_a}(\text{mols}) \qquad L = \frac{8.33 R_o G_o}{m_o} + \frac{8.33 A G_a}{m_a}$

$V = \frac{1000}{379} = 2.4\,(\text{mols}) \qquad \frac{L}{V} = 3.153\left(\frac{R_o G_o}{m_o} + \frac{A G_a}{m_a}\right)$

Call $\frac{L_n}{V_n} = F_n \qquad \therefore F_n = 3.153\left(\frac{R_o G_o}{m_o} + \frac{A G_a}{m_a}\right)\frac{P}{p_n}$ ... (3)

To find "A" — (1) $\frac{A G_a}{m_a} = \frac{.316(O.-W.)}{W.}$ ... (5) (O. & W. = Dry and Wet Gas Analyses of Methane

(2) $\frac{A G_a}{m_a} = \frac{.323 R_o G_o P}{m_o p_o}$ ... (6)

Approximately (1) $F_n = \frac{3.55 R_o G_o P}{m_o p_n}$ .... (8)

(2) $F_{na} = \frac{.0133 R_o P}{p_{na}}$ .... (9)

Or for $F_{na} = 1$ $\quad R_o = \frac{75 p_n}{P}$ .... (10)

Fig. 10.

(Continued on next page)

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TABLE 6

Tray No.	1	3	5	7	9	11	13	15
Gas Analysis (By Volume)								
C	77.32	78.66	77.90	78.84	85.95	92.10	95.51	91.81
C	9.11	9.29	9.18	9.97	8.59	5.17	3.09	5.27
C	7.94	8.05	8.09	7.95	3.12	2.16	1.05	2.27
C	1.34	1.22	1.72	1.08	1.59	.27	.07	.12
C	2.15	2.24	2.17	1.70	.48	.21	.13	.33
C	2.11	.54	.94	.46	.27	.09	.14	.21
Oil Analysis (By Volume)								
C	.34	.43	.46	.45	.40	.64	.51	.38
C	.35	.34	.38	.39	.21	.20	.27	.13
C	1.24	1.27	1.30	1.24	.30	.26	.42	.06
C	.52	.57	.55	.45	.12	.06	.10	.22
C	1.51	1.55	1.35	1.04	.09	.09	.16	.08
C	2.42	1.02	.57	.31	.07	.05	.05	.01
R	93.62	94.82	95.39	96.12	98.81	98.70	98.49	99.10
Partial Pressures in Oil								
C	7.07	6.93	7.30	7.81	4.21	2.78	5.28	2.50
C	5.11	5.18	5.08	4.85	1.14	.96	1.55	1.91
C	.70	.71	.67	.55	.15	.07	.11	.26
C	1.44	1.40	1.20	.89	.071	.08	.13	.07
C	.66	1.60	1.48	.083	.014	.010	.09	.06
Partial Pressures in Gas								
C	50.03	52.07	51.48	51.96	56.30	60.32	52.48	59.74
C	5.89	6.15	6.07	6.57	5.63	3.39	2.02	3.43
C	5.14	5.33	5.35	5.24	2.04	1.41	.69	1.48
C	.87	.81	1.14	.71	1.04	.18	.05	.07
C	1.39	1.48	1.43	1.13	.31	.14	.09	.02
C	1.36	.36	.62	.30	.18	.06	.09	.01
Saturation								
C	1.20	1.13	1.20	.84	.75	1.11	2.61	.72
C	.99	.97	.95	.93	.56	.68	2.27	1.30
C	.80	.88	.59	.77	.14	.39	2.20	3.71
C	1.03	.95	.84	.80	.23	.57	1.44	3.50
Working Pressure Temperature								
	64.7	66.2	66.1	65.9	6.5	65.5	65.4	65.1
	92°	89°	86°	84°	80°	...	78°	77.5°
Total Oil Pressure								
	14.98	15.82	15.73	14.18	5.58	4.90	7.16	4.77
Methane P.P. by Diff.								
	49.7	50.4	50.4	51.7	59.9	60.6	58.2	60.3

KENTUCKY-TENNESSEE

(Continued from Page 66)

southeast of Fordsville. Wood Oil Co.'s No. 4 Nannie Rogers lease is reported at 10 bbls. in the Barlow sand in the Friendship Church Field. Same company has a duster in No. 7 on the J. C. Ralph farm, and a 6-bbl. pumper in No. 7 on the J. E. Mitchell 130 acres. Same company's No. 11 on the R. A. Duke 200 acres produced an initial of 85 bbls.

In the western part of the Bartlett Pool, the Tracy Supply Co. and others' No. 3 on the J. B. Dodson is reported at 30 bbls. Wood Oil Co.'s No. 8 J. E. Mitchell 130 acres is a very light producer, said to be about 1 bbl.

The Ohio Oil Co.'s No. 1 on the W. H. Renfron lease is said to be a dry hole. Bellamy and others have a dry hole on the A. F. Bellamy farm. Creek Drilling Co. could do no better in No. 2 on the Ira Howard farm in the King Pool, the well being drilled to a total depth of 810 feet.

In the eastern part of the Ambrose-Weller Pool, James C. Ellis and others' No. 14 on the Bob Keith is rated at 20 bbls. initial. Same firm's No. 1 on the A. H. Ralph farm, near Ralph's Store, produced an initial of 10 bbls. at a total depth of 525 feet. In this well a string of 494 feet of casing was set and 15 feet of Jett sand from which the oil comes at 504 to 519 feet. In the same firm's No. 1 on the J. P. Morgan farm, in the Adaburg area, a string of 490 feet of casing was set, sand at from 505 to 515 feet, and shot with 60 quarts, the initial pumping amounted to 10 bbls. Same firm's No. 1 on the Royal heirs lease is reported good for 25 bbls. initial.

Leeper Oil Co.'s test on the Tom Westerfield, in the Whittaker Pool, produced an initial of 20 bbls. In this well a string of 580 feet of casing was set, sand from 585 to 610 feet, and shot with 80 quarts. In the Dundee section, Richards, Dehart & Fisher drilled in a 5-bbl. showing on the J. B. Mitchell farm. In the Deanfield area, S. H. Russell and others' No. 6 on the S. C. Creer produced 30 bbls. In this hole a string of 710 feet of casing was set, sand at from 715 to 745 feet, and shot with 120 quarts. S. R. Nigh and others' No. 10 on the A. P. Kelley 340 acres, same field, produced an initial of 20 bbls. and a string of 390 feet of casing was set, sand from 400 to 420 feet, and shot with 80 quarts.

Joseph B. Mayer's No. 15 on the Gunther-Gant property near Collier Creek, produced an initial of 3 bbls. This is in the vicinity of what is known as Ellis Station, along the Illinois Central Railroad, the oil being found in the Barlow sand.

Chester Oil Co.'s second test on the Thomas Hamilton farm, in the Adaburg area, produced 5 bbls. initial. D. J. White and others' No. 3 on the Jeff Wade 50 acres, same area of the county, pumped an initial of 15 bbls. at 405 feet, sand being found from 390 to 401 feet and a string of 388 feet of casing. Well was shot with 60 quarts. C. E. Daugherty and others drilled a dry hole in No. 1 on the G. Harrison farm.

Daviess County Wells

Penn-Indiana Oil Co.'s No. 7 on the First National Bank property is the largest completion since the last review from the Daviess County fields, showing 160 bbls. initial, while No. 6 on the same lease developed into a dry hole.

Brewer, Robbins and Thrasher found a dry hole on the Weir farm, in the Cane Run School part of the county. Creek Drilling Co. is reported to have drilled in a duster on the James Irwin lease, 4 miles east of West Louisville, in the western portion of Daviess County.

Jetsan Oil Co. and others' No. 7 on the Soth Hinton, in the Jones Pool, southwest of Whitesville, is reported good for 10 bbls., in the Jett sand. Wittmer Oil & Gas Co.'s second well on the Joe Brannon, in the Cane Run School section, developed a dry hole. Young, Duncan and others' No. M. D. Yeiser is reported good for 12 bbls. initial under pump. Eastern Gulf Oil Co.'s No. 9 on the Morgan G. Ruby 125 acres, in the Red Hill Pool, came in a dry hole. Petroleum Exploration Co.'s test on the W. R. Russell farm, in the Red Hipp Pool, was a duster.

Cumberland Petroleum Co.'s No. 6 on the S. H. Easton 75 acres, in the Burton Pool, is good for 20 bbls. initial. Vickers and others report a dry hole in No. 3 on the Stinnett heirs farm, near the Ohio County line. James C. Ellis and others' No. 1 on the C. Tanner lease is reported to be a dry hole.

Creek Drilling Co. is reported to have struck a 3,000,000-foot gas volume on the Joe Birkhead lease, offsetting the O'Flynn lease, in the Utica Field, in the southern part of the county. The gas was found in the Barlow sand at 1,450 feet.

Scattered Completions

In Warren County, H. W. Teague's No. 1 on his own farm, southwest of Bowling Green, and 600 feet from the south line and 210 feet from the east line of the lease, pumped only 4 bbls. initial at 1,169 feet. Lucky Strike Oil Co.'s No. 3 well, 400 feet from the north line and 500 feet from the east line of the R. E. Walters lease, southwest of Bowling Green, pumped 3 bbls. from the shallow 500-foot sand. Johnson & Julian's No. 16 well, 1,000 feet from the south line and 200 feet from the west line of the J. R. Jenkins 373 acres, about

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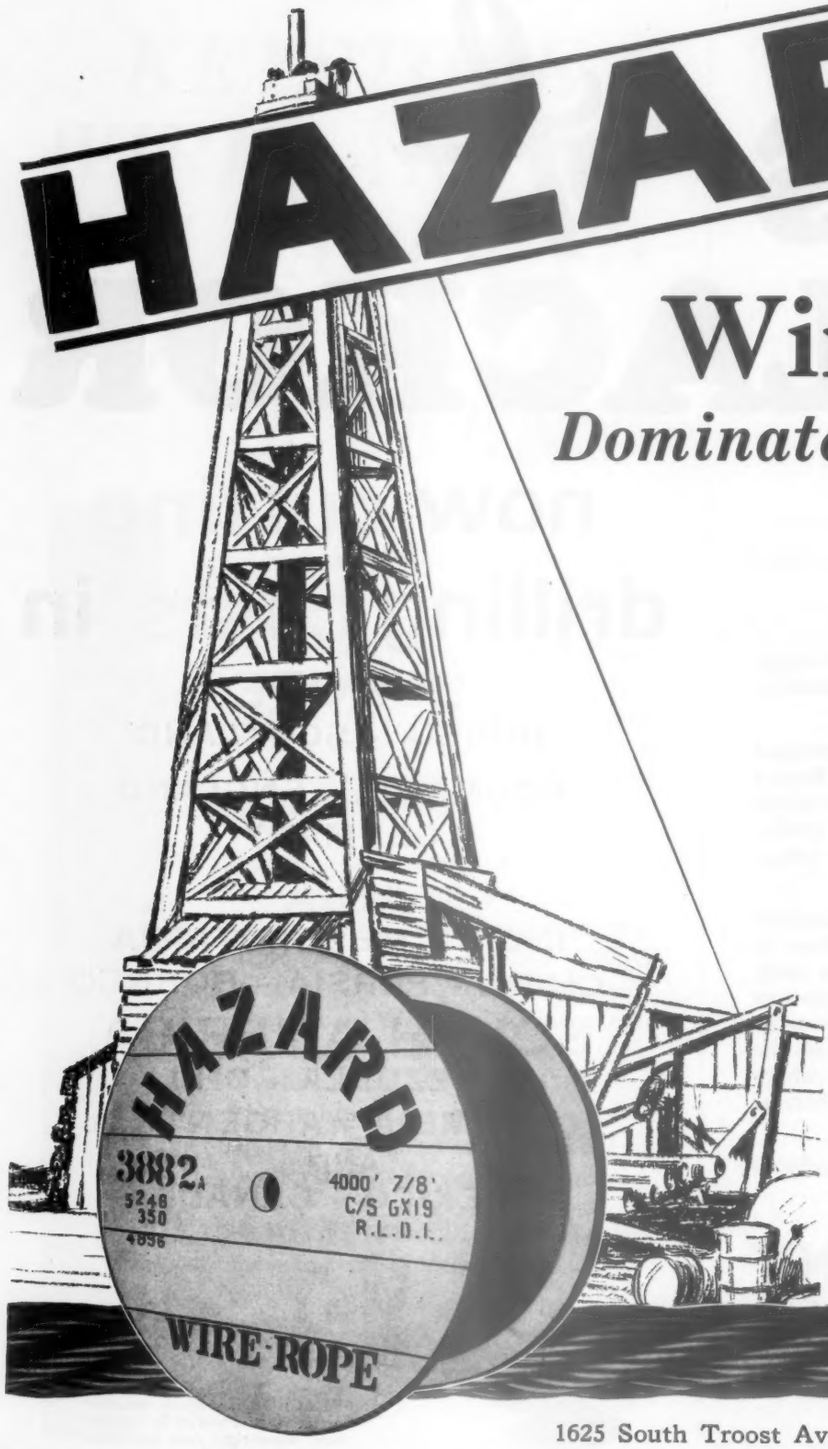

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Parkersburg, W. Va., El Dorado, Kans.

PRICHARD SUPPLY CO.
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PRODUCERS SUPPLY & TOOL CO.
Marietta, Ohio; St. Mary's, W. Va.; Fort Worth, Tex.; Olney, Tex.; Graham, Tex.; Bristow, Okla.; Coleman, Tex.; Muenster, Tex.

UNITED OIL WELL & SUPPLY CO.
Los Angeles

5 miles west of Bowling Green, was a dry hole at 623 feet.

Henderson County reports a well estimated at 100 bbls. initial, drilled by H. Z. Clark, who spent a number of years developing a field in Clay County, Tennessee, but went into the Henderson County area and has developed an excellent well. He has moved the drilling outfit from the G. P. Jeter farm, where he got the good well to the J. C. Duncan farm about 250 yards north of the Jeter well. The Jeter well is opposite the Niagara School, and in what is known as the Niagara Pool. The well on the J. C. Wallace farm, a mile east of the town of Niagara on the Robards Road, same county, is reported to show for 25 bbls. These wells in the Niagara Pool are all being put on the pump, so as to have everything ready when the line from the pool to the Green River is completed. The crude will be shipped by barges, as the Green River is navigable to the Ohio River.

C. C. Clark, driller for the Ohio Oil Co. on the Kirk lease, in the Taffy area of Ohio County, was severely burned when escaping gas ignited.

Charles C. Baxley, with the Wood Oil Co., was badly injured when struck over the heart by a 1-inch pipe which caught in the flywheel.

CENTRAL WEST FIELDS

(Continued from Page 66)

No. 1 on the Mary Jividen, Section 23, pumped from the upper Berea sand 6 bbls. initial from 1,689-1,707 feet, total depth 1,709 feet. R. C. Miller and others' No. 4 W. B. Cross farm, is reported dry, as is Ket Thompson and others' test on the R. M. Beaver, Section 10, in the upper Cow Run at from 562 to 564 feet. R. A. Tyree and others' No. 4 on Mary Jividen, Section 24, only had a light showing of oil in the upper Cow Run at 560 feet and is going deeper. This firm is also drilling No. 5, same farm. In Bedford Township, the Ohio Fuel Gas Co.'s No. 2-4,735 on the John Heitger, Section 32, is an average gas producer in the Maxon sand from 913 to 915 feet. In Scipo Township, H. McTaggart and others' No. 5 Lydia Rowley, Section 13, is a fair gas well in the lower Cow Run sand from 736 to 778 feet, total depth 781 feet. W. H. Shipe and others' test on the William and Lena Wells, Section 28, Salisbury Township, is a light gas well and produced 1 bbl. of oil.

In Jackson County, Coal Township, the Ohio Fuel Gas Co. has a very light gas showing in No. 1-3,569 on the Yhos. Fox, Section 10, in the Clinton at 2,551-57 feet, total depth 2,571 feet. Penn Oil & Gas Co. made a location for No. 7 Leo Evans, Section 35, Lick Township, and the Libbey Owens Glass Co. is drilling on the B. E. Davis, Section 16, Jefferson Township.

In Stark County, Lawrence Township, the Penn Oil & Gas Co. has a light gas well in a second test on the Jacob Nichte, Section 3, at 3,920-60 feet. Same company is drilling No. 1 Christ Luther, Section 3, and made a location for another test on the George Seifert, Section 4, same township.

In Fairfield County, Walnut Township, the Heisey Gas Co. made a location on the John J. Smith and others, Section 24.

In Guernsey County, Wheeling Township, the Local Oil Co.'s No. 1 James Sayer, Section 19, is reported to have shown about 1 bbl. at a total depth of 3,442 feet. In this well the top of the Niagara limestone was found at 3,272 feet, top of lime pay 3,443 feet, total depth 3,472 feet. Ohio Fuel Gas Co. has a fairly good gas well in No. 1-4,727 on the John Grambleitt, Section 2, at a total depth of 3,586 feet. East Ohio Gas Co. made a location for a second test on the E. C. Quillan, Section 11, and the North Salem Oil & Gas Co. made a location for No. 3 on the C. and A. Gray, same section. Ohio Fuel Gas Co. is drilling No. 1-4,736 on the Lorene C. Stocker, Section 9. Same company is drilling No. 1-4,136 on the Edgar Burlingame, Section 36, Spencer Township, and the Moore Oil Co. is drilling a second test on the John T. Moore, Section 7, Cambridge Township.

In Belmont County, Payne & Swarthout are drilling No. 6 A. C. Shepherd, Sections 12-21, Wayne Township. A. C. Phillips and Son are drilling on the Jesse M. Keller, Section 6, Nottingham Township, Harrison County.

In Morgan County, the Ohio Fuel Gas Co. has an average gas well in No. 1-4,764 on the Harley J. Thomas, in fractional Section 17, in the lower Berea at 1,610-35 feet, total depth 1,609 feet. W. C. McBride, Inc., No. 3 on the Marion Mills, Section 26, is a light gas well in the same formation at 1,556-74 feet, total depth 1,576 feet. Kemrow Co. is drilling No. 3 Lewis T. Hoffman, Section 30, and the Ohio Fuel Gas Co. is drilling No. 1-4,723 on the Russell James, Section 24. James Bump and others are drilling on the Lecta M. Wilson, Section 27, Malta Township. Ohio Fuel Gas Co. has an average gas well in No. 1-3,563 on the Grant Coulson, Section 2, Penn Township, in the lower Berea sand at 1-608-35 feet, total depth 1,639 feet. Dover Oil & Gas Co.'s No. 25 on the James L. Stokes, Section 35, is a light gas well in the lower Berea at 1,604-25 feet, total depth 1,629 feet. Malta & McConnelsville Gas Co. is drilling No. 6 on the John and Anna E. Wetherall, Section 36, same township. Penn Oil & Gas Co. is drilling No. 5 John Greathouse, Section 10. In Deerfield Township, Pierce and others are drilling a second test on the C. H. Aler and others' farm, Section 16. In Union Township, Van Fossen & Scott's No. 31, on the Charles Harrison, Section 11, is reported good for 3 bbls. in the upper Cow Run sand from 360 to 375 feet, total depth 380 feet. Helnic Petroleum & Gas Co. is drilling on the Eva J. Harrison, Section 22, same township.

INDIANA

Pike County, in the southwestern part of Indiana, is developing some very nice gas production. In Washington Township, the Bement Gas Co.'s Nos. 3 and 4 on the Aaron George farm, in Section 29, are rated good for 4,000,000 and 2,000,000 feet at 1,240 and 1,107 feet. Harry Rischer is starting a test on the John Arnold, same area. H. C. Darby and others' second test on the G. Stewart, Section 23, Logan Township, same county, is reported good for an initial of 40 bbls., after plugging back to the regular sand. The Bement Gas Co.'s No. 2 on the Phoebe McAtee, in Location 16, Clay Township, same county, reported showing for 20 bbls. from the Rumble sand at 980 feet. Same company is drilling No. 2 on the John McAtee, same area, and is getting rig in for No. 2, same farm. Shell Petroleum Corp. is drilling a test to the west of the town of Hosman, same county. Texana Oil Co. has moved the rig and drilling outfit from a test on the John Ford farm, Section 9, Clay Township, after reaching a depth of 2,185 feet, but intend to move back later and make a deep test.

Kern and Lee are drilling a wildcat a half mile west of Hudsonville, in Daviess County, farm name unknown. Richards and others are drilling on the Strassell farm, in Ohio Township, Spencer County, and Sharp Randall has a duster in No. 1 on the Raymond Bretz, Section 3, same township.

Petroleum Exploration Co., well known Kentucky concern, is reported making preparations for drilling a wildcat on the R. Howell farm, in Monroe County, Ind.

ILLINOIS

Nine new completions are reported from the Dupo Field, in Sugar Loaf Township, St. Clair County, in the western portion of the State, southeast of East St. Louis. They are not large producers, but exceptionally good wells for such shallow territory. Landwehr and Sacks' No. 3 on the E.St.L. and C.W.R.R. right of way, in the NE, Section 28, Sugar Loaf Township, produced an initial of 6 bbls. from 486 to 552 feet. No. 5, same lease, produced 70 bbls. from 484 to 553 feet. Sparks & Poulton's No. 1 on the Robert Rudolph Lot, SE, Section 21, produced an initial of 40 bbls. at

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from 508 to 560 feet, while No. 1 of the same firm on the W. H. Lindeman, in the same quarter section, produced but 4 bbls. from 505 to 568 feet.

In the same township, Moseman Brothers' No. 1 on the Dr. Cooper lot, SE, Section 21, produced an initial of 60 bbls. at from 477 to 545 feet. Thomas Wheland's No. 1 on the L. A. Briggs lot, SE, Section 21, pumped 25 bbls. from 498 to 564 feet. Otto Karbe's No. 1 S. E. Shwartz lot, SE, Section 21, pumped 25 bbls. from 475 to 546 feet. G. P. Hironimus' No. 1 W. K. Melton lot, SE, Section 21, pumped 15 bbls. from 496 to 557 feet, and the H. & M. Operating Co.'s No. 1 on the O. L. Dashner lot, same quarter section, also pumped 15 bbls. from 486 to 557 feet. All the above wells get their oil from Trenton Rock formation.

ROCKY MOUNTAIN AREA

(Continued from Page 60)

Oil Co.'s No. 4, Section 16-8s-5e, Utah County, is drilling at 800 feet after shutting off water at 500 feet.

COLORADO

The Five Square Oil & Gas Co.'s No. 1-A State, SW cor., Section 16-4n-69, 3 miles west of the town of Berthoud, has been standing for several weeks with oil in the hole and occasionally making a head that put the oil over the top. No test of the well has been made and there is considerable speculation as to its possibilities. It will be recalled that the Midwest Refining Co. drilled a test on this structure several years ago and while it had good showings of oil and gas, it finally was abandoned in the Morrison formation. The Five Square company then acquired the leases and drilled No. 1 Fagin, NE SE NE, Section 17-4n-69, which is a 2,000,000-foot gasser at a depth of 2,900 feet. The company then moved a half mile to the south and drilled No. 1-A State. This well, according to several geologists who have examined the cuttings, is bottomed in the top of the Muddy sand of the Dakota series at a total depth of 3,750 feet and has 3,300 feet of high grade oil standing in the pipe. A few days ago it made a head and put 50 bbls. of oil on the sump in a few minutes. They will run tubing and make a test of production, but it has not been decided whether it will be drilled deeper into the sand. This structure is one of the front range domes which has been geologized many times and was generally considered as attractive as the Wellington Dome farther to the north until the Midwest test was drilled. The decision of the Midwest to pull out after obtaining good shows was somewhat of a puzzle and the explanation generally accepted is that the drilling requirements and royalties were too burdensome to undertake the development. It is probable that several wells will be drilling within the district the next 30 days. One well already has been started by A. L. Mosher and others, on the Berryman lease in the NW cor., Section 28-4n-69, a mile south of No. 1-A State. Still farther to the south and a little to the west, in Boulder County, the Standard Oil Co. of Colorado spudded in and shut down to complete rigging on its No. 1, SW SE SE, Section 33-3n-70. This well is on another structure, and one-fourth of a mile southwest of a well drilled by the Left Hand Oil Co. which had good shows in the Muddy sand at 1,940 feet. The structure is known as the Left Hand Creek Dome.

Piceance Creek Wildcat

Another Colorado wildcat that is attracting widespread interest is the White Eagle Oil & Refining Co.'s No. 1-A Fordham, NW cor. SW, Section 9-2s-96, on the Piceance Creek Dome in Rio Blanco County, in the western part of the State. This is a test of the Green River formations of Tertiary age, and the hole is bottomed at 2,140 feet and is showing from 500,000 to 1,000,000 feet of gas from sandy, shaly horizons along with good shows of oil. The first sand is expected around 2,300 feet and immediately below it around 500 feet of sand separated by breaks of shale are expected; one of the sands, which shows saturation at the outcrops is estimated to be 200 feet thick. The well is being watched by the scouts from a number of companies and the importance of a discovery in the Tertiary formation can hardly be overestimated. The formations so far are said to be almost identical with those found in the productive fields of California. One other test in the Tertiary, drilling in this county, is the Texas Production Co.'s No. 1 Potter, C NE SW, Section 30-2n-96, White River Dome, which is bottomed at 2,234 feet in lime. It is being drilled with a rotary to get through the gas horizon which was found in the Wasatch in other wells on the structure.

In Moffat County, the Midwest Refining Co.'s No. 24-SD Parkinson, SE NW, Section 22-4n-92, Iles Dome, has been completed at a total depth of 3,485 feet after plugging back from the top of the Sundance at 3,570 feet to produce from the first and third Morrison. It has 2,800 feet of oil standing in the hole. No production test has yet been made. The McCormick Oil Co.'s No. 1-A Sales, SE SE, Section 28-4n-92, is drilling at 2,865 feet, and Thomas McLaughlin and others' No. 1 Williams, NW SW, Section 2-3n-92, is bottomed on top of the Morrison at 4,080 feet and underreaming the 6¼-inch at 3,905 feet. The Texas Production Co.'s No. 1 Berlin, SW NE, Section 19-12n-100, Bartram Dome, is bottomed at 1,185 feet and underreaming the 13⅜-inch to lower and make a water shutoff.

Routt County

In Routt County, the Midwest Refining Co.'s No. 10 Barmettlor & Clayton, NW Section 4-7n-86, Chimney Creek Dome, is bottomed at 905 feet and running the 12½-inch to shut off the 2,000,000 feet of gas encountered in the Frontier.

In Jackson County, the Midwest's No. 21-X Rich, NW Section 9-6n-80, Buffalo Creek, is bottomed at 1,435 feet in coarse light sand with a hole full of water and is shut down to run the 12½-inch.

In Arapahoe County, near Denver, the McDeb Drilling Co.'s No. 1 Fitzsimmons, Section 7-4s-66, is drilling at 3,835 feet with the 8¼-inch at 3,825 feet. Water has given considerable trouble for the last 1,000 feet and this will be shut off with the 8¼-inch as soon as a hard formation is reached.

The Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor., Section 24-4s-69, Jefferson County, has landed the 6¼-inch on bottom at 3,290 feet and has finished cleaning out.

In Yuma County, the Phillips Petroleum Co.'s No. 1 Andrews, NW NW, Section 3-2s-42, Rosenkrantz Dome, is drilling at 2,840 feet, and Major Petroleum, Inc.'s No. 1 Winegar, SE NW, Section 7-2s-43, Blackwolf structure, is drilling at 1,440 feet.

Fremont County has two completions. The Mojada Oil & Drilling Co.'s No. 5 Hassler, SW SE, Section 21-20-69, was completed at 2,497 feet and made 70 bbls. the first 24 hours. After pumping for a week the oil was exhausted and the hole has been abandoned. Tobin & Hoffman's No. 1 Sells, NW SE, Section 33-18-70, was dry and abandoned at 2,665 feet. No show of oil or gas were encountered.

Pueblo County

In Pueblo County, the Kime Petroleum Co.'s No. 1 Unger, NW NE NE, Section 5-26s-61, on the Apishapa anticline, is drilling at 750 feet. This well commenced spudding on July 2 for a 1,000-foot test.

In Weld County, the Platte Valley Petroleum Co.'s No. 1 Patterson, SW SW, Section 24-6n-61, Greasewood Dome, is preparing to lower the 6¼-inch from 4,000 feet to 4,400 feet. Several strata of cavy shale in the 400-foot interval have been cemented.

In Delta County, the Crawford Oil & Gas Producing Co.'s No. 1 McKissen, SW cor. NE, Section 28-15-91, on the Crawford Dome, 3 miles east of the town of the same name, is reported drilling in the Mowry shale at 250 feet. This structure was noted in the Hayden reports and also has been reported upon by M. J. Smith, of Santa Fe, N. Mex. The first Morrison sand should be reached at a depth not greater than 300 feet, according to this geology. This will put the three sands in the Morrison, the Sundance, and the Embar and Tensleep of Pennsylvanian age within 3,000 feet of the surface to which depth the company expects to drill if production is not found in commercial quantities in the shallower sands. The company, which is being financed by local people, has a nice block of leases on the structure.

WYOMING

A repetition upon a small scale of the excitement caused several years ago when the Midwest Refining Co. made a discovery of oil on the North Casper Creek structure, 25 miles northwest of Casper, took place this week when Minneapolis interests brought in a producer on the same dome. The Midwest well, located in the SE Section 36-37-82, was reported making anywhere from 3,000 to 10,000 bbls. a day from a depth below 3,200 feet and the people in that part of the country had visions of another boom similar to that supplied by Salt Creek and Big Muddy. However, they were disappointed as the well did not make anywhere like the amount of oil with which it was credited and upon being drilled deeper made up the deficiency in water and was abandoned. This well had considerable gas in the Sundance at 982 feet and larger quantities at greater depth, the oil being found in the Tensleep. The structure has continued to be of interest in spite of the results in that well. The Columbus Oil Co. drilled a well on the NW Section 7-36-81, which topped the Embar at 3,070 feet and the Tensleep at 3,250 feet and was abandoned at 3,400 feet after encountering water at 3,395 feet. The structure has a closure of 1,800 feet, but the formations appear to be badly broken up and until now no commercial production has been developed.

Last year Michael C. Weisman and associates, of Minneapolis, obtained leases and permits on the structure and drilled three wells which were gassers at around 900 feet. The firm operated as the All-American Oil Co. No. 1 was located in the SE cor. NW, Section 1-36-82, 1½ miles south of the Midwest well. It made approximately 400,000 feet of gas at 985-87 feet. This well has been drilling down as a deep test. This week it reached what is presumed to be the top of the Tensleep at 3,200 feet and was drilled to 3,225 feet. The oil is reported to have filled the hole and slopped over within three and one-half hours. A later report says the well is making between 350 and 400 bbls. a day beaned down. The reports are to the effect that no water is showing. The oil is heavy and black and about 22 degrees gravity. The Weisman interests are drilling No. 3 in the SE cor. Section 36-37-82, near the old Midwest well, and No. 4 in the SW NW, Section 31-37-81. No. 2 was drilled in the NE cor. NW, Section 1-36-82. The purpose of these wells, it is understood, was to develop sufficient gas to warrant the construction of a carbon black plant.

Salt Creek

Two completions were reported in Salt Creek this week, these being the Wyoming Associated's No. 19-SD-2, NW, Section 35-40-79, completed at 2,662 feet after drilling deeper, with an initial production of 1,773 bbls., and the other was the Midwest Oil Co.'s No. 18-SD-2, NW Section 25-40-79, a 144-bbls. well at 2,844 feet.

In Johnson County, the Carter Oil Co.'s No. 1 First National Bank, SE Section 17-48-82, Billy Creek Dome, joint with the Consolidated Royalty Oil Co. and the Western Exploration Co., is mudding off gas at a total depth of 3,187 feet to drill deeper. This well was completed in the Frontier in 1923 with a flow of 58,000,000 feet of gas and was the discovery well on that structure. Early in the present year when it was opened up it made two flows of accumulated light oil. Several efforts have been made to drill below the Frontier on the top of the structure in the hopes of obtaining oil in the lower horizons.

The Prairie Oil & Gas Co.'s No. 1 Baird, NE cor. SW Section 22-31-81, Clark Dome, Natrona County, is drilling at 2,400 feet. It is through the Dakota sands and probably in or close to the Sundance.

In Hot Springs County, the Texas Production Co.'s No. 1, Section 23-45-100, Skelton Dome, is cleaning out on bottom at 3,300 feet, and the Midwest Refining Co.'s No. 8, SE Section 6-44-98, Wagonhound Dome, is spudding at 93 feet in black shale.

In Weston County, Updike & Bridges are reported to have taken over the Teton Oil Co.'s test on SE SE Section 30-45-64, Fiddler Creek Dome, and preparing to resume at 950 feet.

The Midwest Refinng Co. has made a location for No. 31, SW cor. SE Section 1-18-78, on the Dutton Creek Dome in Carbon County. One well previously has been drilled to production on this structure by the Midwest and is shut in. It produced light oil of about 33 gravity. The Producers & Refiners Corp. is going back into its No. 7, Section 7-26-89, on the Wertz Dome and is rigging up to drill deeper. It was completed a few weeks ago at 3,658 feet as a 40,000,000-foot gasser. No. 8, on the same Section, has been drilled to 4,150 feet and is some kind of a well, not disclosed by drilling reports. It was in sand at 4,101 feet last week and boilers were being moved back. Same company's No. 1 U. S. Petroleum, Section 6-26-89, Wertz Dome, spudded to 60 feet and shut down.

Big Horn County

In Big Horn County, the Producers & Refiners' No. 3, NW NW Section 24-56-98, Garland Dome, joint with the Kinney-Coastal Oil Co., is reported to have found the top of the Embar at 3,940 feet and to be coring in that formation at 4,055 feet.

In Park County, the Midwest Refining Co.'s No. 1 Rosenberg, NE cor. Section 26-58-98, Frannie Dome, is drilling at 1,320 feet in gray sandy lime, and its No. 36 Rosenberg, SE NW Section 25-58-98, is still bottomed at 2,887 feet in lime. The Texas Production Co. is moving in for its No. 1 Sonners, NW cor. Section 29-51-100, Oregon Basin Dome, for an offset on the southeast of the Wyoming Western Oil Co.'s No. 1 Hough which was completed last year as a 300-bbl. well. This is the first operation started by that company on the structure since acquiring large holdings last year and it is probably the beginning of a campaign consisting of several wells to increase the supply of crude for its refinery at Cody. The Cody Petroleum Co.'s No. 6 Klindt, NE NE Section 7-51-100, which came in several months ago as a producer in the top of the Tensleep at 3,755 feet, only to run into water upon going 15 feet deeper, is plugging back to 3,736 feet to produce. Its No. 8 Klindt, NE NE Section 7-51-100, is changing over to rotary tools at 2,860 feet, and its No. 1 Garner, SW NE Section 27-51-101, is drilling at 3,953 feet.

The Kinney-Coastal Oil Co.'s No. 1 Dykeman, SE SW Section 22-3n-1w, Pilot Butte Dome in Fremont County, is shut down at 3,358 feet to test a showing in sandy shale at 3,319-42 feet. Twenty or more barrels of oil have been bailed from the stray sand, estimated to be about 100 feet above the Muddy. It also is making around 1,000,000 feet of gas. This test is headed for the Sundance regardless of what is found in higher horizons.

In Sublet County, in the southwestern part of the State, the Woolf Petroleum Co.'s No. 5, Lot 3, Section 3-26-113, La Barge Field, is reported to have pumped 138 bbls. initial production, or more than the total production of the other four producing wells on this lease. Same company's No. 6, west of No. 5 and on the same section, is spudding. The Superior-Wyoming Oil Co.'s No. 5, Section 3-26-113, flowed over the top and made 100 bbls. in four hours from a total depth of 890 feet. This makes five wells drilled by this company on this lease of which three are producing oil wells and one a gasser. Rig has been moved to location for No. 6 Lester Scoville and others' No. 1 Dry Piney, NE Section 9-29-113, is bottomed at 2,581 feet and underreaming. When operations were resumed after the winter shut down, there was 250 feet of fluid in the hole of which the top 100 feet was oil.

In Uinta County, the California Co.'s

No. 1 Union Pacific, Section 7-17-116, is drilling at 3,475 feet in red shale.

In Lincoln County, Reeves Aylmore and others' No. 1 Higgins, NE NW Section 7-21-119, Sage Creek, is drilling at 645 feet in gray shale. The Midwest Refining Co.'s No. 1 Waterfall, SE SW Section 35-22-115, is bottomed at 3,860 feet in gray sandy lime and its No. 1 Little Grays River, SE Section 25-37-117, is drilling at 1,360 feet in gray sandy lime.

MONTANA

Great Falls reports the Ohio Oil Co. is surveying for a gas line from northern Wyoming to Butte and Anaconda, Mont. The Oregon Basin Field in Wyoming is now flowing about 10,000,000 feet of gas into the air daily as waste, and there is much more gas to be had in that field. There are other gas areas proven in that part of Wyoming that would become feeders to a system to supply gas to Montana cities. The Big Horn Basin in Wyoming has only one outlet that would not require the crossing of a high mountain range and this outlet is to the north into Montana.

The Crow Indians on the reservation in Big Horn County, southern Montana, are framing a formal protest against the Standard companies, which the Indians allege have failed to develop the Soap Creek Field in that part of the State. The Indians state that the Soap Creek Field was discovered about eight years ago and that the Standard interests bought up all the leases and then shut down everything. No work has been done on the wells or leases since that time and the Indians claim that were the field to go on production and a royalty received from the oil produced, they would be in much better shape financially.

New Wells in Sunburst

The Sunburst Field has three new oil wells and one gas well for the week's record. L. W. Hill drilled in two wells on Section 22-35-2 and both are fair producers of about 25 bbls. each from the Ellis sand. The Hannah Porter Oil Co. brought in a new well on Section 36-34-1 that looks like a 50-bbl. well. This test found considerable gas in the Ellis sand and flowed several times while drilling in. The gas flows makes the well look like a big gusher. On Section 22-33-1, the Sunburst Oil & Gas Co. has a gasser in the Ellis sand that is estimated at 7,000,000 feet and which will be used in the Great Falls gas line.

The L. C. Smith well on Section 19-34-1 which was drilled as a deep test to 2,160 feet was shut down and the hole abandoned below the stray sand at 1.350 feet where a showing of oil was had. The well will be plugged back to the stray sand and shot there.

The deep tests drilling in the Sunburst Field are all shut down or fishing. The Potlatch well is still fishing for a lost bit. The Mahan well drilling to make a test of the deeper formation southwest of Dunkirk, Toole County, Montana, is also fishing for a lost string of tools. The Drumheller well north of Cut Bank is underreaming at 2,560 feet. The Consolidated Oil Co.'s deep test on Hamilton Coulee Dome, Sweetgrass County, is drilling at 5,645 feet and had a small gas show at 5,605 feet. The Carter Oil Co. has started a deep test on the Six Shooter structure in southern Montana.

A report from Baker, Mont., in the eastern part of the State says that the Dougherty interests drilling in the Baker Glendive Field found a 7,000,000-foot gasser at 900 feet. This is the largest gas well ever found in that area if the report is true.

Asphaltic Road Oil a Success

A test by North Dakota engineers of the respective merits of asphaltic road oils versus tar binder made from coal resulted in a decisive victory for the asphaltic road oils. The stretch of road tested is on Highway No. 10 east of Bismarck and a stretch of this road was paved with asphaltic road oil while a similar stretch was paved with coal tar. The asphaltic road is showing much better wearing qualities than the coal tar stretch and road engineers from Idaho and Montana paid a visit to Bismarck to view the test and results.

The Rocky Mountain region will use about 10,000,000 gallons of asphaltic road oils in the building of highways during 1929. Wyoming will use about 1,000 and Montana will use 430,000 gallons. This asphaltic road oil is the only binder that has successfully resisted weather and traffic wear on the loose soils and material of this region.

ROCKY MOUNTAIN FIELDS
Daily Average Pipe Line Runs Week Ending August 12

WYOMING	
Salt Creek	30,230
Frannie	....
Big Muddy	2,290
Oregon Basin	5,390
Byron	....
Dutton	50
Elk Basin	790
Ferris	80
Grass Creek	3,170
Greybull	10
Hamilton	1,900
LaBarge	2,370
Lance Creek	230
Lost Soldier	3,910
Osage	470
Poison Spider	790
Rock River	2,430
Rex Lake	130
Lander	450
Simpson Ridge	60
Teapot Dome	40
Mule Creek	710
Total	54,100
MONTANA	
Cat Creek	1,440
Kevin-Sunburst	6,940
Pondera	3,000
Lake Basin	90
Total	11,470
COLORADO	
Moffat	1,122
Fort Collins	2,450
Florence	875
Iles	1,734
Tow Creek	456
Boulder	25
Rangely	100
Total	6,762
NEW MEXICO	
Artesia	875
Cap Rock (Maljamar)	454
Hogback	....
Rattlesnake	1,250
Table Mesa	....
Total	2,579
Grand Total	74,911

KANSAS FIELDS

(Continued from Page 52)

Koogler, SW cor. NE, Section 20- 26-5, is a location. No. 87 Koogler, NE cor. NW NW, Section 26-26-5, is also a location. Location for No. 16 Grissman, NW cor. SW NE, Section 20-26-5, has been made.

Empire Oil & Refining Co.'s No. 1 Nixon, SW cor. SE SE, Section 15-27-5, has been completed for 40 bbls. in sand 2,758-72 feet. No. 10 Cranston, SW cor. SE SE, Section 22-27-5, has been completed for 275 bbls. in sand 2,731-66 feet.

Chase County

Sinclair Oil & Gas Co. is building the rig for No. 1 Owens, SE cor, Section 13-21-9.

Chautauqua County

E. B. Miller's No. 2 Wiggam, SE cor., Section 33-32-10, has been completed for 30 bbls. in Peru sand 1,481-1,500 feet.

Cowley County

Roth & Faurot moved the rig in for No. 1 Stone, SW cor. NE, Section 34-32-4. McKnabb & Bess and others' rig is on the location for No. 1 Zeien, SW cor. NE NW, Section 19-32-5.

Ellis County

Mid-Kansas Oil & Gas Co. made location for No. 1 Johnson. SW cor. SE NE, Section 9-13-19w. Phillips Petroleum Co.'s No. 1 Johnson, SW cor. NE, Section 9-13-19w, has been completed for 305 bbls. in sand 3,593-95 feet.

Elk County

Sherman and others' No. 1 McSpadden, NW cor. NE, Section 4-31-10, is drilling at 310 feet.

Greenwood County

Empire Oil & Refining Co. is erecting the rig for No. 2-B Norton, SE cor. SW SE, Section 15-22-12. Mid-Continent Petroleum Corp.'s No. 14 Sullivan, CWL NE NW, Section 14-24-12, is spudding. Waltom Oil Co. is moving in material for No. 1 Dalton, NE cor. SE NW, Section 5-24-13. Elk River Oil Co. has a machine on the ground for No. 1 Peterson, NW cor., Section 20-27-11.

Phillips Petroleum Co.'s No. 4 Pixlee, NE cor. NW, Section 10-22-10, has been abandoned at 2,300 feet. The Texas Company's No. 7-C Edwards, SE cor. SW SE, Section 21-23-11, made 500 bbls. in sand 1,871-1,971 feet. Phillips Petroleum Co.'s No. 1 Beal, NE cor. NW NE, Section 28-23-11, made 650 bbls. in sand 1,874-1,965 feet. Shafer & Howell's No. 15 Sugder, CNL NE NW, Section 15-23-13, has been completed for 10 bbls. in sand 1,785-1,811 feet. Murphy and others' No. 7 Olsen, NE cor. NW NE, Section 6-25-9, has been completed for 90 bbls. in sand 2,131-51 feet. West Coast Leasing Co.'s No. 1 Souder, NW cor. SW SE, Section 5-26-13, is dry and abandoned at 1,729 feet.

Kingman County

D. P. Fleeger and others' No. 1 Royl, NE cor. SE SW, Section 16-27-7w, is dry and abandoned at 1,337 feet.

Lyons County

Phillips Petroleum Co. and others' No. 1 McCray, SE cor. NE SW, Section 27-21-10, is rigging up.

Marion County

Jim Davis is erecting the rig for No. 1 Bartles, SE cor. NE, Section 1-19-1. Empire Oil & Refining Co. made location for No. 1 Reizuig, NE cor. NW NW, Section 34-20-2. Darby Petroleum Co.'s No. 4 Nickle, SW cor. NE SE, Section 12-19-2, has been completed for 85 bbls. in Viola lime 2,831-52 feet.

McPherson County

Empire Oil & Refining Co. made location for No. 1 Voshell, NE cor. SE NE, Section 9-21-3w.

Reno County

O. Witt and others' rig is up for No. 1 Olson, SE cor. NW, Section 14-22-6w. D. J. Wilson and others made location for No. 1 McPeters, C S half NW, Section 22-26-8w.

Pratt County

O'Haver, Jones and others made location for No. 1 Gereke, C NE SW, Section 7-26-14w.

Saline County

Dixie Oil Co. made location for No. 1 Olson, NW cor. NE, Section 10-16-3w.

Sedgwick County

Wentz Oil Corp. moved the rig in for No. 4 Bright, SW cor. SE NW, Section 1-26-1w. No. 1 Miers, SE cor. SW, Section 10-26-2, is a rig on the ground. Bu Vi Bar Petroleum Corp.'s No. 7 Carr, NE cor. SW, Section 1-26-1w, has been completed for 115 bbls. in sand 3,355-67 feet. Skelly Oil Co. & Davis' No. 10 Wilson, NW cor. SW NE, Section 1-26-1w, Valley Center Pool, made 800 bbls. in sand 3-370-79 feet. No. 11 Wilson, SW cor. NW NE, Section 1-26-1w, was completed for 200 bbls. in sand 3,352-57 feet.

Wentz Oil Corp.'s No. 1 S. Bright, SE cor. NE NW, Section 1-26-1w, has been completed for 277 bbls. in sand 3,337-42 feet. Bu Vi Bar Petroleum Corp. and others' No. 6 Wright, NE cor., Section 12-26-1w, made 538 bbls. in sand 3,358-65 feet. T. B. Slick and others' No. 1 McKay, SW cor. SE SW NE, Section 11-26-2, is dry and abandoned at 3,180 feet. The Texas Company's No. 1 Blood, NW cor. SW SW, Section 21-28-1, made 470 bbls. in sand 3,091-3,102 feet.

Sumner County

Bu Vi Bar Petroleum Corp. and others made location for No. 1 Wilson, NE cor. NW, Section 27-34-2w.

Woodson County

Sullivan & Mellrose made location for No. 1 Pegram, SW cor. NW, Section 33-23-14. S. F. Peterson's No. 2 Andrews, NE cor. SE SW, Section 31-23-16, is dry and abandoned at 17,535 feet.

Trego County

The Prairie Oil & Gas Co. is moving the rig in for No. 1 Kutina, NE cor. SW NE, Section 29-15-21w.

OKLAHOMA FIELDS

(Continued from Page 78)

North Sasakwa Pool

Company, farm—	Location	Wells	Prod.
Carter:			
Spellman	7-6-8	1	18
Texas:			
Bryan	9-6-8	1	70
From State:			
Marshall	6-6-8	1	off
Carter:			
Phillip	18-6-8	1	55
Prairie:			
Patton	18-6-8	1	off
Shell:			
Holatka	7-6-8	1	1,388
Signal:			
Bond	13-6-7	1	136
Sinclair:			
I. Davis-A	7-6-8	4	6,314
Total North Saskawa Pool		11	8,017

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 71)

Turner et al's No. 1 Borsig, 150 ft. from S of SE cor. G. Emig Sur. 130, 6 miles west of Paint Rock.....Shut down 535 ft.

CRANE COUNTY

Gulf Prod. Co.'s No. 66 McElroy, 1,442 ft. from N and 4,950 ft. from W of Sec. 200, Blk. F, C.C.S.D.& R.G.N.G. .....Drlg. 2,985 ft.

Gulf Prod. Co.'s No. 67 McElroy, 2,102 ft. S and 2,640 ft. W of NE cor. Sec. 201, Blk. F, C.C.S.D. &R.G.N.G.R.R. .....Rig.

Gulf Prod. Co.'s No. 7 Waddell, Sec. 10, Blk. B-23, 2,640 ft. from S, 330 ft. from W .....Top salt 1,103 ft.; slight show gas 2,285 ft.; 1,000,000 ft. gas at 3,065 ft.; top lime 2,972 ft.; shut down 3,610 ft.; 500 ft. water; making 3,000,000 ft. gas; fishing; preparing to pump.

Gulf Prod. Co.'s No. 8 Waddell, 330 ft. N and W of SE cor. Sec. 2, Blk. B-24, school land .....Rigging up.

Humble Oil & Ref. Co.'s No. 1-D University, 2,310 ft. from N and 1,650 ft. from W Sec. 34, Blk. 30 .....Shut down 2,903 ft.

Simms-Atlantic No. 10-A University, 2,310 ft. S and E Sec. 39, Blk. 30, Univ. .....Spudding.

Simms-Atlantic's No. 2-F University, Sec. 45, Blk. 30, 2,310 ft. from N, 330 ft. from E. University .....Location.

T. P. Coal & Oil Co.'s No. 2 University, 2,310 ft. from S, 1,650 ft. from W Sec. 34, Blk. 30, University Land..Location.

Church-Weekly's No. 3 Dowell-University, 990 ft. from S and W Sec. 39, Blk. 30 .....Shut down 3,009 ft.; 1,500 ft. oil in hole; top pay 2,890 ft.

Warner-Quinlan's No. 5 University-Davis, 2,310 ft. from S and W Sec. 39, Blk. 30 .....Drlg. 2,925 ft.

CROCKETT COUNTY

Eppenaur et al's No. 2 Noelke, 500 ft. N and 1,250 ft. E of SE cor. Sec. 64, Blk. 1, I.&G.N.R.R. Sur.....Shut down 650 ft.

Lewis & Daniels' No. 1 Pecos River Bed, 19 yards S and 37 degrees E of NW cor. Sec. 33, Blk. 1, I.&G.N. Sur..Shut down 1,135 ft.

W. W. Donnelly & Young's No. 1 Shannon, SW SW SE Sec. 42, Blk. BB, T.C.R.R. Sur. .....Drlg. 1,550 ft.

W. W. Donnelly & Young's No. 1 Middlebuster, C Sec. 11, Blk. 9, D.&S.E. Sur. .....7,000,000 ft. gas at 1,663 ft.; shut down 1,755 ft.

Moncrief's No. 1 Andrews, 1,320 ft. from S, 1,170 ft. from W of Sec. 57, Blk. UV, G.C.&S.F.R.R. .....Shut down 1,481 ft.

Moncrief's No. 3 Todd, 330 ft. from S and E Sec. 29, Blk. VV .....Location.

Taylor-Link's No. 3 Powell, 1,000 ft. S of No. 2, Sec. 52, Blk. BB, E.L.&R.R. Sur. .....Drlg. 2,000 ft.

CULBERSON COUNTY

Deep Rock Oil Co.'s No. 2 Kloh, 330 ft. N and 1,388 ft. W Sec. 39, Blk. 59 .....Running 10-in. casing 860 ft.

Hickey & Stiver's No. 1 C. O. Finley, 600 ft. N and 1,980 ft. W Sec. 20, Blk. 82 .....Small oil show 1,331 ft.; shut down 2,260 ft.; hole full water; elevation 3,874 ft.

West Coast Oil & Exploration Co.'s No. 1 McGregor, C NW Sec. 14, Blk. 81 .....Total depth 720 ft.; straightening crooked hole.

Scott & Dittman's No. 1 Miller, 1,160 ft. N and 2,480 ft. E Sec. 1, Blk. 97, Public School Land ... Rainbow 1,056 ft.; 300 ft. sulphur water 1,725 ft.; oil show 2,528 ft.; hole full sulphur water. shut down 2,886 ft.; running 6-in. casing.

ECTOR COUNTY

Anderson's No. 1 fee, 1,320 ft. E along N line Sec. 19, and 150 ft. N at right angles with line Sec. 18, Blk. B-16, Public School Land ... Moving in material.
R. H. Penn et al's No. 1 Kloh-Rumsey, 330 ft. N and 2,640 ft. E of SW Sec. 7, Blk. 44, Twp. 3s, T.&P. R.R. Sur. ... Rig.

EL PASO COUNTY

Laytex' No. 1 Malone, 2,200 ft. SW and NW Sec. 46, J. M. Day, Sur. ... Shut down 1,107 ft.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlow, Sec. 60, V-8, J. C. Clift Sur. ... Fishing 2,600 ft.

FISHER COUNTY

Bickerstaff et al's No. 1 McWhirter, 2,640 ft. E and 150 ft. N of SW cor. of Sec. 295, Blk. 2, H.&T.C. Sur. ... Shut down 2,000 ft. for orders.
Cranfill & Reynolds' No. 1 Flanagan, 990 ft. from S and W of Sec. 200, Blk. 1, B.B.B.&C. Sur. ... Underreaming 2,660 ft.
Cranfill & Reynolds' No. 1 Texas Cement, Sec. 10, 330 ft. from N and W of most westerly NW cor. ... Rigging up.
Magnolia Pet. Co.'s No. 1 Lee, Sec. 357, 2,310 ft. from N and 4,286 ft. from W ... Drlg. 2,320 ft.
Mesa Oil Co.'s No. 1 Griffin, 849 ft. N and 465 ft. E of NE cor. Sec. 20, School Land ... Shut down 2,985 ft.
Midwest Oil Co.'s No. 1 Steele, 660 ft. from S, 440 ft. from W Sec. 210, Blk. 1 ... Rigging up.
H. Riley's No. 1 J. H. Veatch, 250 ft. S and 990 ft. E of NW cor. Sec. 4, English Sur. ... Spudded and shut down.
Roeser & Pendleton's No. 1 Johnson, 330 ft. from N, 3,870 ft. from W Sec. 71, Blk. 1, H.&T.C. ... Drlg. 1,700 ft.
Roeser & Pendleton's No. 2 Haught, Sec. 191, Blk. 1, 590 ft. from N and 1,320 ft. from W ... Drlg. 2,860 ft.
The Texas Company's No. 1-B Stephens, 330 ft. from N and W of S half SW Sec. 79, Blk. 1, H.&T.C.R.R. Sur. ... Drlg. 1,365 ft.

GARZA COUNTY

Bell Thompson's No. 1 Tuffing, 330 ft. from S, 2,310 ft. from E Sec. 10, Blk. 6, H.&G.N. ... Spudded and shut down.
Emerald Oil Co.'s No. 1 J. C. Bargsley, 2,310 ft. from E and 330 ft. N of SW cor. Sec. 135, Blk. 5, H.&G.N. ... Total depth 2,551 ft.; 200 ft. oil in hole.
Gulf Prod. Co.'s No. 1 Street, C Sec. 7, Blk. 8, H.&G.N. R.R. Sur. ... Drlg. 3,795 ft.
Paul Steed et al's No. 1 Boren, Sec. 136, Blk. 5, 330 ft. from N, 990 ft. from E, H.&G.N.R.R. Sur. ... Machine.

GLASSCOCK COUNTY

A. & F. Oil Co.'s No. 1 Turner, 2,310 ft. from N and 330 ft. from E Sec. 19, Blk. 33, Twp. 2s, T.&P. Sur. ... Shut down 2,507 ft.; top lime 2,075 ft.; show oil 2,075-80 ft.; recementing casing.
California Co.'s No. 1 Currie, 990 ft. from N and 2,310 ft. from E Sec. 219, Blk. 29, W.&N.W.R.R. Sur. ... Location.
The California Co.'s No. 3 Currie, 990 ft. S and 2,310 ft. W of NE cor. Sec. 219, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Chas. Daniel et al's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor. Sec. 7, Blk. 34, Twp. 3s, T.&P. Sur. ... Shut down 500 ft.
Gibson-Johnson's No. 1 Dean, 1,320 ft. S and E of NW cor. Sec. 2, Blk. 33, Twp. 2s, T.P.R.R. Sur. ... Top salt 1,075 ft.; top lime 2,560 shut down 3,454 ft.
Houston Oil Co.'s No. 1 McDowell, 330 ft. from N and 2,310 ft. from E Sec. 30, Blk. 33, Twp. 2s ... Shut down 2,603 ft.
Kirby Pet. Co.'s No. 1 Phillips, Sec. 23, Blk. 33, Twp. 2s, 330 ft. from N and 2,310 ft. from W ... Drlg. 2,268 ft.; top pay 2,212 ft.; 1,200 ft. fluid in hole; cleaning out after shot.
Landreth and others' No. 1 Huston, Sec. 29, Blk. 35, Twp. 2s, 330 ft. from S, 2,310 ft. from E, T&P Sur. ... Location.
Lion Oil & Ref. Co.'s No. 1 Coffee, 330 ft. from N and E Sec. 22, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ... Drlg. 1,772 ft.
Midwest Oil Co.'s No. 1 Edwards, 330 ft. from S, 2,259 ft. from E, Sec. 20, Blk. 34, T.&P.R.R. Sur. ... Drlg. 2,396 ft.
Penn Oil Co.'s No. 1 Schaffer, 1,320 ft. from S, 2,640 ft. from E Sec. 4, Blk. 32, Twp. 3s, T.P.R.R. Sur. ... Drlg. 1,710 ft.
Schermerhorn Oil Co.'s No. 1 Phillips, Sec. 23, Blk. 33, Twp. 2s, T.&P.R.R. Sur., 330 ft. N, 2,310 ft. E ... Location.
Sun Oil Co.'s No. 1 Phillips, Sec. 14, Blk. 33, Twp. 2s, 330 ft. from S, 2,310 ft. from W ... Location.
Texas State Oil Co.'s No. 1 Coffey, 330 ft. from S and 990 ft. from E Sec. 19, Blk. 34, Twp. 2s ... Shut down 2,461 ft.
World Oil Co.'s No. 2-C McDowell, Sec. 21, Blk. 34, Twp. 2s, 330 ft. S and 2,310 ft. E of NW cor. ... Rig up setting engine.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Elwood, 320 ft. from N and W line, League 7, Wilbarger County School Land ... Drlg. 3,224 ft., anhydrite.

HOWARD COUNTY

Amerada Pet. Corp.'s No. 12 Roberts, 660 ft. from S, 1,022 ft. from E. Section 128, Blk. 29 ... Drlg. 610 ft.
California Co.'s No. 3 Roberts Lease No. 1, Sec. 137, Blk. 29, 1,654 ft. from S, 990 ft. from E, W.&N.W.R.R. Sur. ... Rigging up.
O. Chalk's No. 4 fee, 1,650 ft. S and W of Sec. 124, Blk. 29, W.&N.W.R.R. Sur. ... Preparing to test 1,740 ft.
Continental Oil Co.'s No. 1 Kloh-Rumsey, 2,310 ft. S, 330 ft. W of NE cor. Sec. 13, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ... Location.
Continental Oil Co.'s No. 2 Kloh-Rumsey, 1,650 ft. S and 330 ft. w of NE cor. Sec. 13, Blk. 33, Twp. 2s, T.&P. Sur. ... Location.
Continental Oil Co.'s No. 3 Kloh-Rumsey, 990 ft. S and 330 ft. W NE cor. Sec. 13, Blk. 33, Twp. 2s, T.&P. R.R. Sur. ... Location.
Continental Oil Co.'s No. 9-A Settles, 220 ft. from N, 660 ft. from E Sec. 135, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Cranfill & Reynolds' No. 2 Abrams, 243 ft. from W, 660 ft. N of No. 1 Sec. 2, Blk. 32, Twp. 2s ... Drlg. 1,435 ft.
F. H. E. Oil Co.'s No. 11-B Dora Roberts, 1,700 ft. S and 2,310 ft. E of NW cor. Sec. 137, Blk. 29, W.&N.W. Sur. ... Drlg. 2,616 ft.
Fuhrman Pet. Co.'s No. 1 Read, 2,310 ft. N and 330 ft. E of SW cor. Sec. 41, Blk. 32, Twp. 1n, T.&P.R.R. Sur. ... Top salt 935 ft.; drlg. 2,965 ft.
Gulf Prod. Co.'s No. 7 Clay, 330 ft. S and 990 ft. W of NE cor. W half Sec. 155, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Group No. 1 & Continental Oil Co.'s No. 7-A Settles, 1,650 ft. N and 2,310 ft. W of SE cor. Sec. 135, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Group No. 1 & Continental Oil Co.'s No. 8-A Settles, 990 ft. N and 2,310 ft. W of SE cor. Sec. 135, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Howard Oil Corp.'s No. 2 Kloh et al, 990 ft. from S and E of NW Sec. 5, Blk. 32, Twp. 2s ... Total depth 2,330 ft.; top pay 2,315-25 ft.; pumped 2 bbls. per hour; preparing to test.
Howard Oil Corp.'s No. 3 Abrams, 990 ft. from N and 330 ft. from W of Sec. 5, Blk. 32, Twp. 2s, T.&P. R.R. Sur. ... Top pay 2,250 ft.; shut down 2,280 ft.
Humble Oil & Ref. Co.'s No. 4 Clay, 1,650 ft. from W, 330 ft. from S, Sec. 138, Blk. 29, W.&N.W.R.R. ... Location.
Laurel Oil & Cosden Oil Co.'s No. 13 Roberts, 1,700 ft. N and 330 ft. W of SE cor. Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ... Total depth 1,293 ft.; show oil here.
Laurel Oil & Cosden Oil Co.'s No. 14 Roberts, 1,600 ft. N and 330 ft. W of SE cor. Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Magnolia Pet. Co.'s No. 13 Dora Roberts, 2,440 ft. N and 1,650 ft. E of SW cor. Sec. 136, Blk. 29, W.&N.W. Sur. ... Shut down 2,927 ft.
Marland Prod. Co.'s No. 3 Clay-F, 250 ft. S and 660 ft. W of NE cor. Sec. 138, Blk. 129, W.&N.W.R.R. Sur. ... Shut down 2,675 ft. with show oil 2,595-2,675 ft.
McGinley & Seigler's No. 1 Barnett, 330 ft. S and E of NW cor. Sec. 928, Blk. 29, W.&N.W.R.R. Sur. ... Total depth 1,347 ft.; top pay 1,327-43 ft.; shot 30 qts. from 1,327-43 ft.; bailed 15 bbls. oil after standing 16 hrs.; cleaning out.
McGinley et al's No. 2 Hyman, Sec. 92, Blk. 29, W.& N.W.R.R. Sur. ... Rigging up.
Merriwether's No. 1 Smith, 150 ft. from S, 2,490 ft. from W Sec. 45, Blk. 33 ... Shut down 425 ft.
Merrick & Bristow's No. 11 Hooks, Sec. 140, Blk. 29, 625 ft. from N, 2,015 ft. from W ... Shut down 1,780 ft.
Merrick-Bristow's No. 9 Roberts, 1,155 ft. from S, 220 ft. from W Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ... Drlg. 1,347 ft.
Merrick & Lamb's No. 9 Clay, 660 ft. from S, 360 ft. from E, Sec. 126, Blk. 29 ... Drlg. 700 ft.
Moody Oil Co.'s No. 16-B, 990 ft. from N, 330 ft. from W Sec. 137, Blk. 29, T.&P. ... Shut down 285 ft.
Moody Oil Co.'s No. 17-B, Sec. 137, Blk. 29, 1,650 ft. from N, 330 ft. from W, W.&N.W.R.R. ... Shut down 1,321 ft.
Moody Oil Co.'s No. 19-B Roberts, Sec. 137, Blk. 29, 1,040 ft. from N, 2,310 ft. from W ... Location.
Moody Oil Co.'s No. 20-B Roberts, 1,750 ft. from N and 2,310 ft. from W, Sec. 137, Blk. 29 ... Shut down 243 ft.
Moody Oil Corp.'s No. 21-B Roberts, Sec. 137, Blk. 29, 2,310 ft. from N and 990 ft. from W, W&NW Sur. ... Drlg. 1,298 ft.
Moody Oil Corp.'s No. 20-E, 1,650 ft. S, 2,310 ft. W of NE Sec. 136, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Moody Oil Co.'s No. 22-B Roberts, 2,310 ft. from N and 1,610 ft. from W, Sec. 137, Blk. 29 ... Shut down 250 ft.
Moody Oil Co.'s No. 23-B, 990 ft. from N and W of Sec. 137, Blk. 29 ... Shut down 261 ft.
Moody Oil Co.'s No. 19-E Roberts, 190 ft. from N and 2,310 ft. from E Sec. 136, Blk. 29 ... Cellar.
Owen & Sloan's No. 13 Roberts, 1,700 ft. from S and 330 ft. from E Sec. 136, Blk. 29, W.&N.W. ... Shut down 1,293 ft.
Owen & Sloan's No. 14 Roberts, 1,600 ft. from S, 330 ft. from E Sec. 136, Blk. 29, W.&N.W. ... Location.
Plymouth Oil Co.'s No. 4 Abrams, 330 ft. from N and 1,650 ft. from W Sec. 5, Blk. 32, Twp. 2s ... Drlg. 1,650 ft.
Plymouth Oil Co.'s No. 5 Abrams, Sec. 5, Blk. 32, Twp. 2s, 1,650 ft. from N, 330 ft. from W, T.&P. ... Building rig.
Pure Oil Co.'s No. 1 Scrivner, 990 ft. E, 330 ft. N of SW Sec. 4, Blk. 32, Twp. 3s, T.&P.R.R. Sur. ... Total depth 2,302 ft.; top pay 2,265 ft.; pumped 80 bbls.; cleaning out after shot.
Shell Pet. Corp.'s No. 1-B Settles, 1,650 ft. from S, 2,310 ft. from W Sec. 135, Blk. 29, W.&N.W.R.R. Sur. ... Drlg. 1,404 ft.
Shell Pet. Corp.'s No. 1 Kloh-Rumsey, 2,310 ft. from S and 330 ft. from E Sec. 13, Blk. 33, Twp. 2s, T.& P.R.R. Sur. ... Drlg. 1,410 ft.
Shell Pet. Corp.'s No. 2-A Roberts, 1,320 ft. from N, 1,650 ft. from W Sec. 156, Blk. 29, W.&N.W.R.R. Sur. ... Drlg. 1,500 ft.
Simms Oil Co.'s No. 1 Clay, 330 ft. from S, 2,310 ft. from W Sec. 127, Blk. 29 ... Shut down 700 ft.
Sprague Oil Co.'s No. 3 Roberts, 990 ft. from N and 330 ft. from W, Sec. 156, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Superior Oil Co.'s No. 14 Dora Roberts-B, 2,310 ft. E and 280 ft. S of NW cor. Sec. 127, Blk. 29, W.&N.W. of SW cor. Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ... Shut down 2,601 ft.
Ward Oil Co.'s No. 8 Roberts, 1,485 ft. from S, 230 ft. from W Sec. 137, Blk. 29 ... Shut down 1,319 ft.

HUDSPETH COUNTY

California Co.'s No. 1 University, 3,821 ft. N and 2,554 ft. E of SW cor. Sec. 19, Blk. E ... Total depth 1,640 ft.; drlg. up casing.
George Richardson's No. 1 Faxton, 2,640 ft. from N and W Sec. 9, Blk. 16 ... Spudded and shut down.
Western States Oil Co.'s No. 1 Moore, C SE Sec. 16, Blk. 71, Twp. 6, T.&P. Sur. ... Shut down 2,635 ft.; fishing job.
Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW Sec. 12, Blk. 18 ... Shut down 3,140 ft.; fishing.

IRION COUNTY

Baker & Hodges' No. 1 Tankersley, 1,320 ft. from S, 150 ft. from W Sec. 23, G.C.&S.F. ... Shut down 1,303 ft.
Crawford Oil Co.'s No. 1 Williams, 450 ft. from N, 150 ft. from W Subd. 8 ... Drlg. 240 ft.
Carl Cromwell's No. 1 Tankersley, 2,490 ft. from S and E, Sec. 1,219, T.C.R.R. Sur. ... Location.
Kimbrough & Flinchbaugh's No. 1 Tankersley, 160 ft. S and 200 ft. W of NE cor. S half Sec. 712, Ford Willig Sur. ... Show oil 1,318-29 ft.; total depth 1,335 ft.; averaging 60 bbls. daily 37 degrees gravity oil; shut down for storage.
Pecos Valley Oil Co.'s No. 2 Stocks, Sec. 19, Blk. 3, 1,020 ft. from S and W, H.&T.C. Sur. ... Fishing 1,200 ft.
Webb's No. 2 Nutt, 200 ft. from N and 711 ft. from E Subd. 5 ... Drlg. 927 ft.
Kingwood Oil Co. et al's No. 1 J. D. Suggs, SE NW SE Sec. 19, Blk. 7, H.&T.C. Sur. ... Show gas 7,656 ft.; drlg. 7,657 ft.
P. H. Williams' No. 1 Ash, C of Sec. 20, Washington County ... Shut down 3,535 ft.

JEFF DAVIS COUNTY

J. K. Hughes Dev. Co.'s No. 2 Means, 1,622 ft. N line, 600 ft. W line Sec. 345, H.&T.C. Sur. ... Show gas 3,271 ft.; fresh water 3,000-05 ft.; underreaming 5 3/16-in. casing; shut down 4,005 ft.; 600 ft. fresh water 4,000-26 ft.

JONES COUNTY

J. H. Adsit et al's No. 1 Swenson, C of NE of SE Sec. 193, B.B.B.&C. Sur. ... Fishing casing at 1,441 ft.
Cosden & Herbert Oil Co.'s No. 1 Bickley, 320 ft. N and 310 ft. E of SW cor. S half NW Sec. 50, Blk. 18, T.&P. Sur. ... Drlg. 2,325 ft.
Cosden-Herbert et al's No. 3 Bickley, 330 ft. N and W of SE cor. of S half NW Sec. 50, Blk. 18 ... Spudded.
W. G. Clark et al's No. 1 Collins, 330 ft. S and E of NW cor. Sec. 29, Blk. 18, T.&P.R.R. Sur. ... Drlg. 2,205 ft.
Humble Oil & Ref. Co.'s No. 2 Bickley, 330 ft. S and W of NE cor. of SW Sec. 50, Blk. 18, T.&P.R.R. Sur. ... Shut down 2,010 ft.
McGinley Corp.'s No. 1 Whittemore, 660 ft. N and W of SE cor. SE NE Sec. 39, B.B.B.&C. ... Fishing 2,737 ft.
McNeeley et al's No. 1 Roscoe Bland, 1,175 ft. N and 240 ft. W of SE cor. Subdivision 20, A-164, DeWitt Co. School Land ... Spudded and shut down.
Phillips Pet. Corp.'s No. 2 M. C. Lan, 990 ft. from N and W line Sec. 15, Blk. 19, T.P.R.R. Sur. ... Top pay 2,532-37 ft. and 2,544-48 ft.; estimated 4 bbls.; drlg. 2,750 ft.
Sedgwick Oil & Gas Co.'s No. 1 Brown, 660 ft. N and 1,320 ft. E of SW cor. Sec. 9, Blk. 1, T.&N.O. Sur. ... Temporarily abandoned location.
Texas Pacific Coal & Oil Co.'s No. 1 Smith, 1,822 ft. S and 2,043 ft. E of SW cor. Sec. 51, Blk. 18, T.&P. ... Drlg. 2,315 ft.

The Texas Company's No. 3 Camp, 1,189 ft. S and 326 ft. W of NE cor. of Sec. 13, Blk. 19, T &P. ..... Total depth 2,575; underreaming 6-in.

KIMBLE COUNTY

C. L. Bryant and others' No. 1 Lambert, 700 ft. from N and W line of F. Lotta Sur. ..... Drlg. 610 ft.
Lindsay Bros.' No. 1 Anderson, Sec. 167, 1,320 ft. from N and E ..... Shut down 965 ft.
McLean & Jamison's No. 1 Cannon, 1,940 ft. N and 300 ft. W of SE cor. Robert Cochran Sur. ..... Underreaming 1,220 ft.

LOVING COUNTY

Lockhart & Co.'s No. 2 Bowen-Wells, 990 ft. NW and 330 ft. SE Sec. 92, Blk. 1, W.&N.W.R.R. Sur. ..... Top salt 725 ft.; drlg. 4,185 ft.
Lockhart & Co.'s No. 1 Hayzell, 2,792 ft. SW of NE line and 660 ft. NW of SE line Sec. 84, Blk. 33, H.&T.C. R.R. Sur. ..... Top salt 700 ft.; fishing 3,980 ft.

LYNN COUNTY

George McCamey's No. 1 Edwards, 165 ft. N and E Sec. 5, Blk. 2, L.S.&W. Sur. ..... Top salt 2,140 ft.; oil show 1,580-90 ft.; cem. 8¼-in. casing 2,500 ft.; total depth 4,500 ft.

MENARD COUNTY

J. C. Barnett's No. 2 Callan, Sec. 1, 1,050 ft. from S. 1,190 ft. W ..... Shut down 270 ft.
Cromwell & Duffey's No. 1 Winslow, C SE Sec. 32, T.&N.O. Sur. ..... Show oil in lime 2,390 ft.; drlg. 2,900 ft.

MITCHELL COUNTY

Alexander's No. 1 Ellwood, Sec. 4, Blk. 18, 1,980 ft. from N and W, Sec. 4, Blk. 18, S.P.R.R. ..... Shut down 500 ft.
California Co.'s No. 7 Foster, Lease No. 1, Sec. 6, Blk. 29, Twp. 1s, T.P.R.R. ..... Set 8-in. casing 1,632 ft.; swabbed 37 bbls. in 24 hrs.; top pay 2,465-75 ft.; drlg. 2,772 ft.
California Co.'s No. 1 Handley, 2,310 ft. from S, 1,650 ft. from E Sec. 1, Blk. 28, Twp. 1n, T.&P. Sur. ..... Drlg. 3,170 ft.; 1 bbl. oil 24 hrs.; top pay 3,015-25 ft.
Seiger's No. 1 Scott, C of NE of SW Sec. 36, Blk. 17, S.P.R.R. Sur. ..... Shut down 730 ft.
Teas & Wheeler's No. 1 Radford, 1,320 ft. N and W of Sec. 1, Blk. 27, T.&P. Sur. ..... Drlg. 4,155 ft.
Westyde Investment Co.'s No. 1 Elwood, C SW Sec. 38, Blk. 16, S.P.R.R. Sur. ..... Top lime 1,290 ft.; shut down 3,216 ft.

NOLAN COUNTY

L. G. Bradstreet et al's No. 1 Kuteman, C NW Sec. 95, Blk. X, T.&P. Sur. ..... 2,500 ft. water in hole; drlg. 3,880 ft.
Phillips Pet. Co.'s No. 1 Plunkett, 330 ft. N and W of SE cor. NW Sec. 66, Blk. 23, T.&P. Sur. ..... Drlg. 3,570 ft.

PECOS COUNTY

W. M. Bowen's No. 1 University, C NE of Sec. 25, Blk. 16, University Land ..... Location.
California Co.'s No. 5 Smith, Lease No. 1, 330 ft. from N, 2,405 ft. from W, Sec. 21, Blk. 194, G.C.&S.F. .... Moving in material.
California Co.'s No. 8 Smith, Lease No. 1, 330 ft. from S and 3,097 ft. from W. Sec. 23, Blk. 194, G.C.&S.F. .. Building rig.
California Co.'s No. 19 Yates, Lease No. 1, Sec. 34, Blk. 194, 1,042 ft. from N and 1,919 ft. from E, G.C. & S.F. ..... Drlg. 475 ft.
California Co.'s No. 20 Yates, Lease No. 1, 1,042 ft. from N, 2,591 ft. from W Sec. 34, Blk. 194, G.C. &S.F. ..... Drlg. 1,102 ft.
California Co.'s No. 1 University-Landrum, Sec. 12, Blk. 18, 330 ft. from S, 1,065 ft. from E, University Land.. Location.
Cosby's No. 2 Smith, Sec. 24, Blk. 194, 1,650 ft. from N, 330 ft. from E, G.C.&S.F.R.R. Sur. ..... Fishing 1,400 ft.; total depth 1,253 ft.; 1,000 ft. oil in hole.
Cowboy Evans' No. 1 Pecos Valley, 2,310 ft. from NW line, 990 ft. from SW line of Sec. 36, Blk. 3, H.&T.C. R.R. Sur. ..... Shut down 950 ft.
Crowey's No. 1 Heiner, 2,400 ft. each way from N and E lines Sec. 589, G.C.&S.F.R.R. Sur. ..... Shut down 1,288 ft.
Clayton Williams' No. 1 Sanford, 160 ft. from NW line, 1,150 ft. from SW line Sec. 55, Blk. 10, H.&G.N..... Show oil 1,390 ft.
Gibson-Johnson's No. 1 Grace, 330 ft. N, 990 ft. from E Sec. 3, Blk. 179 ..... Shut down 1,785 ft.
Gulf Prod. Co.'s No. 20-B Smith, Sec. 22, Blk. 194, 330 ft. from N, 2,322 ft. from E, G.C.&S.F. ..... Location.
Humble Oil & Ref. Co.'s No. 7-B Yates, 275 ft. from S, 2,679 ft. from W Sec. 101, T.C.R.R. Sur. ..... Total depth 1,301 ft.; show gas at 1,190 ft.; show oil 1,280-85 ft.; drlg. 1,407 ft.
Independent Oil & Gas Co.'s No. 1 Iowa Realty Trust Co., 2,310 ft. each way NE SE line Sec. 23, Blk. 10, H.&G.N.R.R. ..... Show oil 1,715 ft.; 50,000 ft. gas at 1,585 ft.; shut down 1,970 ft.
Jayhawk Oil Co.'s No. 1 Price, 1,310 ft. from W, 330 ft. from S, Sec. 6, Blk. 12, H.&G.N.R.R. Sur. ..... Spudded and shut down
J. L. Kennedy's No. 1 Roberts, C of Sec. 78, Blk. 3, T.&P.R.R. Sur. ..... Location.
Sam Kitts and others' No. 1 Sherbino, 330 ft. from N and 990 ft. from W line Sec. 52, Blk. C-4, G.C.&S.F. R.R. ..... Shut down 1,010 ft.; top salt 975 ft.
Landreth's Prod. Co.'s No. 1 University, 330 ft. from N and W lines of E half of SE Sec. 13, Blk. 18, University Land ..... Drlg. 530 ft.
Seminole Oil Co.'s No. 1 Pecos Valley, Sec. 22, Blk. 10, 360 ft. from SW, 2,280 ft. from SE, H.&G.N. Sur..... Location.
Marland Oil Co.'s No. 1 University, Sec. 10, Blk. 17, 1,620 ft. from N, 1,020 ft. from E ..... Top salt 950 ft.; underreaming 1,608 ft.; 3,000,000 ft. gas.
Mauch & Kroger's No. 1 Holmes, Sec. 5, Blk. 178, T.C. Sur. ..... Shut down 1,442 ft.
McMan Oil & Gas Co.'s No. 3 Richardson, Sec. 108, 370 ft. N, 800 ft W of SW cor. Runnels County School Land ..... Shut down 1,270 ft.
McMan Oil & Gas Co.'s No. 4 Tippett, 370 N and 800 ft. W of SW cor. Sec. 108, Blk. 194, CC&SF Sur .... Location.
R. E. Moore's No. 1 Arnold, 1,320 ft. from S and 660 ft. from E lines of Sec. 18, Blk. 1, H.&T.C.R.R..... Drlg. 825 ft.
Moncrief et al's No. 1 Tippett, 330 ft. from S, 330 ft. E of C Sec. 36, Blk. 12, H.&G.N. ..... Location.
W. A. Moncrief et al's No. 2 Tippett, 330 ft. from S and E lines of W half of Sec. 36, Blk. 12, H.&G.N. R.R. Sur. ..... Location.
Moncrief et al's No. 1 Toborg, 330 ft. from S, 330 ft. W of C of Sec. 539, Blk. 1 ..... Drlg. 260 ft.
Moncrief et al's No. 1 University, 1,470 ft. from N and 150 ft. from E Sec. 27, Blk. 18, University Land ..... Fishing 190 ft.
Moncrief et al's No. 2 University, 330 ft. from N, 2,310 ft. from W line of Sec. 13, Blk. 18, University Land... Drlg. 1,440 ft.; 20,000,000 ft. gas.
S. B. Owen's No. 1 Masterson, 330 ft. NE of SW line and 330 ft. NW of SE of Sec. 104, Blk. 10, H.&G.N... Location.
J. D. OMara's No. 1 Bennett, Sec. 592, 1,460 ft. from S, 150 ft. from E, G.C.&S.F. ..... Drlg. 560 ft.
J. D. O'Mara's No. 1 Streety, C of Sec. 1, W. P. Howard Sur. ..... Drlg. 200 ft.
Pecos Crude Oil Pur. Co.'s No. 2 Pecos Valley, 990 ft. from NW, 1,650 ft. from SW Sec. 22, Blk. 10 ..... Drlg. 1,190 ft.
Perrin et al's No. 1 Eaton, 150 ft. each way from NE and NW lines Sec. 27, Blk. 39, H.&T.C. Sur. ..... 18,000,000 ft. gas 1,490-1,502 ft.; spraying salt water from behind 8¼-in. casing set at 1,180 ft.; shut down 1,502 ft.; 5 3/16-in. casing set on bottom with last joint perforated: 18,000,000 ft gas shut in.
Perren's No. 1 Peterson, 150 ft. from NW, 150 ft. from SW Sec. 34, Blk. 10, H.&T.C. ..... Drlg. 1,635 ft.
Phillips Pet. Corp.'s No. 2 Monroe, 990 ft. from N and E of Sec. 39, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 1,375 ft.
Phillips Pet. Corp.'s No. 1 Southwestern Life Ins., 330 ft. from S, 2,310 ft. from W, Sec. 73, Blk. OW ..... Drlg. 100 ft.
Plymouth Oil Co.'s No. 3 Perry, 1,655 ft. fromN, 1,650 ft. from E, Sec. 29, Blk. 178, T.C.R.R. Sur. ..... Location.
Rowen & Tong's No. 1 McDonald, 1,170 ft. from N and 2,490 ft. from E Sec. 46, Blk. 2, H.&G.N. ..... Drlg. 1,455 ft.
B. J. Spikes' No. 1 George Brown, 2,490 ft. SE and SW line Sec. 8, Blk. 3 ..... Show oil 1,180-90 ft.; shut down 2,257 ft.
Schumaker et al's No. 1 Williams et al, 330 ft. N of middle of S line Sec. 1, Blk. 117, G.C.&S.F. ..... Shut down 1,483 ft.
Shell Pet. Corp.'s No. 1 Jackson, 330 ft. NW of SE line and 330 ft. NE of SW line, Sec. 28, Blk. S, H&TC Sur ..... Drlg. 675 ft.
Shell Pet. Corp.'s No. 1-B University, 1,650 ft. from S and 330 ft. from W Sec. 30, Blk. 16, University Land.. Drlg. 785 ft.
Shell Oil Co.'s No. 1-C University, 1,661 ft. from N and 1,050 ft. from W. Sec. 31, Blk. 16, University ..... Drlg. 415 ft.
Skelly Oil Co.'s No. 2 Tippett, 974 ft. N of No. 1, Sec. 108 ..... Spudding.
Southern Crude O. P. Co.'s No. 1 Jackson T-139, Sec. 28, Blk. 3, 1,487 ft. from NE, 2,518 ft. from SE cor..... Location.
Talbot and others' No. 1 Unsicker, 150 ft. each way from NE and SE cor. line of Sec. 25, Blk. 10, H.&G.N. Sur. ..... Material on ground.
Texas-Phillip's No. 1 Campbell, 1,320 ft. from SW, 330 ft. from SE, Sec. 46, Blk. 10, H.&G.N. ..... Shut down 1,730 ft.; 1,000 ft. oil in hole.
Taylor-Link's No. 2 University, 330 ft. from N and W of Sec. 31, Blk. —, University ..... Set 6-in. casing 1,412 ft.
Tidal Oil Co.'s No. 2 University, 2,970 ft. from N, 2,310 ft. from E Sec. 3, Blk. 18, University Land ..... Drlg. 422 ft.
Tidal Oil Co.'s No. 3 University, 2,310 ft. from S and 1,650 ft. from E Sec. 17, Blk. 20, University Land.... Drlg. 567 ft.
Tower & McKenna's No. 1 University, 330 ft. from S and EL line of Sec. 3, Blk. 17 ..... Drlg. 175 ft.
Transcontinental Oil Co.'s No. 1 University, NE NW SW Sec. 18, Blk. 18 ..... Top lime 1,155 ft.; fishing 4,312 ft.; drlg. 4,325 ft.
Trees Oil Co.'s No. 2 Trees, 330 ft. from N and W of SE cor. Sec. 43, Blk. 8, H.&G.N.R.R. Sur. ..... Rigging up.
World Oil Co.'s No. 1 University, 330 ft. from N and 2,310 ft. from E of Sec. 31, Blk. 16, University Land.. Moving in material.
World Oil Co.'s No. 1-B University, 330 ft. from N and E Sec. 13, Blk. 18 ..... Drlg. wet hole 400 ft.

PRESIDIO COUNTY

L. C. Brite's No. 4 Brite, 271 ft. from N, 1,188 ft. from E Sec. 245, Blk. 4 ..... Shut down 670 ft.
Eastland Oil Co.'s No. 1 Tootle, C Sec. 17, Blk. 1, D.P. R.R. Sur. ..... Spudded; shut down.
Phillips Pet. Co., Empire G. & F. Co., Delmar Co. and C. E. Miller's No. 1 Tootle Est., C NE Sec. 75, Blk. 3, D.&P.R.R. Sur. ..... Slight oil show and gas at 2,707 ft.; show oil at 2,767 ft.; drlg. 3,515 ft. (corrected.)
T. P. Coal & Oil Co.'s No. 1 Bogel, 330 ft. S and W, Sec. 83, Blk. 8, G.H.&S.A. ..... Drlg. 207 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor. Sec. 1, Blk. 2, University Land.. Drlg. 3,540 ft.; top pay 2,903 ft.; 1,000 ft. fluid in hole.
Kemrow Co.'s No. 1 Sawyer Cattle Co., 1,320 ft. from N and 1,980 ft. from E line Sec. 8, J. G. Robinson Sur. ..... Location.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ..... Shut down 2,900 ft.; pipe out.
H. T. Hansford's No. 1 Williams, 150 ft. from S and W Sec. 17, Blk. 6, H.&G.N. ..... Spudded and shut down.
Earl Kenby's No. 1 Brooks, 1,980 ft. N and 660 ft. W Sec. 16, Blk. 59 ..... T.D. 325 ft.; fishing.
Southern Crude O. P. Co.'s No. 1 Kloh-Rumsey, 2,310 ft. N and W SE cor. Sec. 23, Blk. 51 ..... Hole full water 1,275 ft.; cem. 12½-in. casing 1,463 ft.; shut down 1,535 ft. for orders; pipe parted, water broke in; skidded 75 ft. west; running 8-in. casing drlg. 1,110 ft.
David R. Thompson's No. 1 A. A. Eddins, Sec. 9, Blk. C-1 ..... Fishing casing 5,658 ft.; underreaming 8¼-in. casing.

RUNNELS COUNTY

Herbert Oil Co.'s No. 1 Currie, 1,866 ft. SE of NW line, 335 ft. SW of NE line Gray Carroll Sur..... Shut down 2,140 ft.
Independent Oil & Gas Co.'s No. 1 Will Rollwitz, 330 ft. S and W of NE cor. S half M. Salinas Sur. No. 20½.. Drlg. 4,200 ft.; hole full salt water.
McLean et al's No. 1 G. W. Clayton, 150 ft. N line, 270 ft. from W line Sec. 135, E.T.R.R. ..... Shut down 1,185 ft.
Vacuum Oil Co.'s No. 4 McMillan, 555 ft. S and 717 ft. W of NE cor. Lot 22, Domingo Diaz Sur., No. 532.... Location.

SCHLEICHER COUNTY

Fort McKavet's No. 1 Tisdale, Sec. 1,499, River Section, 3,630 ft. from S, 150 ft. from W ..... Set 6-in. casing 3,023 ft.; shut down 3,500 ft.
Interstate's No. 1 Whitten, 1,320 ft. from N and W Sec. 35, Blk. LL, T.C.R.R. Sur. ..... Drlg. 4,800 ft.
Underwood's No. 1 Tisdale, 2,095 ft. N and 1,185 ft. from E Sec. 74, Blk. LL ..... Spudded and shut down.

SCURRY COUNTY

Camp Spring Oil & Ref. Co.'s No. 3 Guinn, 1,300 ft. from S, 300 ft. from E Sec. 12, Blk. 3, H.&.T.C.R.R. Sur. ..... Drlg. 310 ft.
Cottingham & Briscoe's No. 1 Trees, C SE Sec. 147, Blk. 97 ..... Drlg. 310 ft.
I. B. Mimms et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C. Sur ..... Spudded and shut down 300 ft.
G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... Drlg. 3,600 ft.
Texas-Canadian's No. 1 Moore, 1,320 ft. from S and W Sec. 379, Blk. 97 ..... Location.

SUTTON COUNTY

Phillips Pet. Co.'s No. 1 A. G. Holman, 2,310 ft. S and 330 ft. W NE cor. Sec. 25, G.C.S.D.&N.G.R.R. Sur. .... Fishing 6,635 ft.; making 1,500,000 ft. gas 6,635 ft.
L. G. Priest's No. 1 Allison, 1,320 ft. N and E of SW cor. Sec. 52, Blk. A, T.&P. Sur. ..... Set 15-in. casing 530 ft.; shut down 3,250 ft.

TAYLOR COUNTY

Dunnigan & Shell Pet. Corp.'s No. 1 Davidson, 2,811 ft. S and W of NE cor. S half of W. R. Willis Survey No. 122 ..... Shut down 380 ft.
V. B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor. Sec. 46, Lunatic Asylum Land ..... Drlg. 4,770 ft.
Magnolia Pet. Co.'s No. 1 Hammer ..... Drlg. 3,009 ft.
Mid-Continent Oil & Gas Co.'s No. 1 Cody, 330 ft. N and E of SW cor. M. E. Cody 116.7-acre tract, Guadalupe County School Land ..... Underreaming 8-in. casing 2,209 ft.

Root Drlg. Co.'s No. 1 Martin, 990 ft. E and 1,650 ft. N of SW cor. Sec. 20, Blk. 19, T.&P.R.R. Sur. ... Drlg. up pipe; total depth 2,475 ft.

TERRELL COUNTY

Big-Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.K.&T.E.R.R. Sur. ... Drlg. 750 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Blk. D-7, E.L.R.R. Sur. ... Shut down 2,575 ft.
Mrs. J. B. McPhee's No. 1 Sam Belt, C Sec. 78, Blk. D-7, E.L.&R.R. Sur. ... Shut down 880 ft.
Milham Exploration Co.'s No. 1 Bassett, Sec. 76, Blk. Y, W. E. Robertson Sur. ... Cem. 6⅝-in. casing 3,986 ft.; drlg. 5,255 ft.
Woodley & Jones' No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ... Shut down 625 ft.

TERRY COUNTY

Kingsland O. P. Co.'s No. 1 Brownfield, C NW SW SW Sec. 7, Blk. 1-A, E.L.R.R. Sur. ... Fishing bailer 5,080 ft.

TOM GREEN COUNTY

Cannon and others' No. 1 Rust, 990 ft. S, 990 ft. W of NE cor. of Sec. 745 ... Rig.
Fitzgerald & Taliaferro's No. 1 Bennett, C SW Sec. 1,628, E. H. Ringer ... Shut down 1,920 ft.
Fuhrman Pet. Co.'s No. 1 Wardlaw, 2,650 ft. from N and E of Sec. 6, Blk. 17, H.&T.C. ... Location.

UPTON COUNTY

Dixie Oil Co.'s No. 30 Burleson, 990 ft. from N and 2,640 ft. from E Sec. 2, John Nidever ... Drlg. 1,946 ft.
Prairie Oil & Gas Co.'s No. 1 Quatters, 330 ft. from S and 1,980 ft. from W, C. C. Dewitt Sur. ... Spudding.
Pure Oil Co.'s No. 1 Hughes, 150 ft. from SW, 150 ft. from N Sec. 4, William Teer Sur. ... Drlg. 2,242 ft.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ... Shut down 4,850 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ... Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511 ft.; cleaning out 4,210 ft.
Producers Oil Co. et al's No. 1 Everett Bros., 2,310 ft. S and 330 ft. E of NW cor. Sec. 40, Blk. DB, C.C.S.D.&R.G.N.G. Sur. ... Shut down 2,510 ft.
Dyar Bros. et al's No. 1 Wilson, 6,830 ft. N NE cor. Sec. 1, T.&P. Sur., thence 1,680 ft. E Sec. 115, Blk. E, G.C.&S.F. Sur. ... Drlg. 3,390 ft.
Valvert Oil Corp.'s No. 1 Bassett, C NE Sur. 47, Blk. Y.. Set 15½-in. casing 767 ft.; set 10-in. casing 1,510 ft.; shut down 3,900 ft.

WARD COUNTY

Atlantic et al's No. 1 Dorr, 1,730 ft. S, 990 ft. W, Sec. 2, J. Howe ... Location.
C. C. Dorr et al's No. 1 Costley, 1,722 ft. from NW, 990 ft. from NE line of Sec. 2, Jos. Howe Sur. ... Location.
Continental Oil Co.'s No. 2 Sealey, 330 ft. S and W Sec. 81, Blk. A, G.M.M.B.&A. Sur. ... Shut down 225 ft.; to run casing.
Gulf Prod. Co.'s No. 2 Hutchins, 330 ft. N and E Sec. 7, Blk. O ... Top salt 1,240 ft.; top pay 2,529 ft.; 2,000,000 ft. gas; 65 bbls. of oil daily.
Barstow Oil & Gas Co.'s No. 1 Monroe, Sec. 50, Blk. 33.. Spudded and shut down.
Gulf Prod. Co.'s No. 6 O'Brien, 2,310 ft. from N, 330 ft. from E Sec. 20, Blk. F, G.M.M.B.&A. Sur. ... Top salt 1,076 ft.; total depth 1,375 ft.
Gulf Prod. Co.'s No. 2 Wristen, 220 ft. NW, 1,470 ft. SW Sec. 18, Blk. 5, H.&T.C. ... Top salt 725 ft.; top pay 2,417 ft.; fishing 2,417 ft.
E. B. Lovelace et al's No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 162, Blk. 34, H.&T.C.R.R. ... Total depth 760 ft.; fishing.
Penn & Atlantic's No. 1 Pecos Mercantile Co., Sec. 16, Blk. 34 ... Drlg. 1,420 ft.
Ramsower and others' No. 1 Boogher, 1,980 ft. NE and SE of Sec. 11, Blk. 5, H.&T.C. ... Drlg. 560 ft.
Shipley's No. 2 Hayzlett, 220 ft. SE and 1,570 ft. SW Sec. 17, Blk. 5, H.&T.C.R.R. Sur. ... Top salt 795 ft.; shot 140 qts. 2,430-68 ft.; flowing 90 bbls.
Shipley et al's No. 1 Monroe, 330 ft. SE SW Sec. 3, Blk. 1 ... Drlg. 458 ft.

WINKLER COUNTY

American Maracaibo Co.'s No. 2 Hendricks-B, 1,980 ft. N and 1,650 ft. E of SW cor. Sec. 28, Blk. B-5 ... Cem. 12½-in. casing 170 ft.; top lime 2,599 ft.; top pay 2,731 ft.; 2,000 ft. oil; increase 2,875 ft.; show water 2,928-31 ft.; running 6-in. csg. 2,945 ft.; total depth 3,416 ft.; plugging back to 3,000 ft.
Atlantic Oil Prod. Co.'s No. 6 Hendricks, 330 ft. S, 2,310 ft. W of NE cor. Sec. 44, Blk. 26, School Land ... Rigging up rotary.
V. T. Bolin's No. 2 Brown et al, 2,000 ft. S and W of NE Sec. 4, Blk. B-5, Public School Land ... Top salt 1,300 ft.; total depth 2,420 ft.; shut down for 8-in casing.
Cranfill & Pickrell's No. 2 Hutchins, 2,310 ft. S and W Sec. 47, Blk. 26 ... Drlg. 985 ft.
Kermit Dev. Co.'s No. 1 Carter, 640 ft. N, 2,230 ft. E of SW cor. Sec. 26, Blk. B-3 ... Shut down 400 ft.; to cure title.
Gulf Prod. Co.'s No. 2-B Lum Daugherty, 2,310 ft. from N and 1,320 ft. W Sec. 22, Blk. 26, P.S.L. ... Cementing 12-in. casing 205 ft.
Humble Oil & Ref. Co.'s No. 13-C Hendricks, 440 ft. from S, 330 ft. from W Sec. 10, Blk. B-12. ... Drlg. 2,190 ft.
Humble O. & R. Co.'s No. 14 Hendricks-C, 440 ft. N and 1,320 ft. E of SW cor. Sec. 10, Blk. B-12, School Land ... Drlg. 1,820 ft.
Humble O. & R. Co.'s No. 1-D Hendricks, 330 ft. from S, 2,310 ft. from W of Sec. 41, Blk. 26 ... Location.
Kermit Dev. Co.'s No. 1 Carter, 640 ft. S, 2,227 ft. W Sec. 27, Blk. B-3 ... Shut down 400 ft. to cure title.
Liner Drlg. Co.'s No. 1 Campbell, 330 ft. from N and E cor. Sec. 2, Blk. B-5 ... Total depth 1,240 ft.; underreaming. 8-in. casing 1,200 ft.
Magnolia Pet. Co.'s No. 2 Scarborough, 1,620 ft. N and 990 ft. W SE cor. Sec. 1, Blk. C-44 ... Top salt 1,125 ft.; gas show 2,825 ft.; running 8¼-in. casing 2,825 ft.; drlg. 2,979 ft; flowing 130 bbls. daily.; top pay 2,850 ft.; total depth 3,062 ft.; flowing 140 bbls. daily.
Continental Oil Co.'s No. 1 Morton-A, 330 ft. N and E of Sec. 16, Blk. B-12 ... Cem. 8-in. casing 2,638 ft.
Shell-Llano Oil Co.'s No. 7 Scarborough, 1,020 ft. from N and W Sec. 2, Blk. 77 ... Fishing 705 ft.
Skelly Oil Co.'s No. 3 Daugherty, 330 ft. W, 1,650 ft. S Sec. 22, Blk. 26, Public School Land ... Top lime 2,440 ft.; cementing 8-in casing 2,469 ft.; recement 6-in. casing set 2,505 ft.
Skelly Oil Co.'s No. 4 Daugherty, 990 ft. S, 330 ft. W Sec. 22, Blk. 26 ... Top lime 2,476 ft.; cementing 8-in casing 2,484; 3,000,000 ft. gas 2,665-75 ft.; drlg. 2,810 ft.
Skelly Oil Co.'s No. 5 Daugherty, 1,326 ft. W, 2,310 ft. S Sec. 22, Blk. 26 ... Location.
Southern Crude O. P. Co.'s No. 4 Hendricks T-88-CX, 1,375 ft. N, 330 ft. E Sec. 21, Blk. 26 ... Top lime 2,417 ft.; cem. 8-in. casing 2,529 ft.; drlg. 2,625 ft.
Southern Crude O. P. Co.'s No. 2 Hendricks T-89-L, 440 ft. from N and 1,320 ft. from W Sec. 15, Blk. B-12... Drlg. 1,229 ft.
Southern Crude O. P. Co.'s No. 4 Hendricks T-90, 2,310 ft. S and E of Sec. 47, Blk. 26 ... Drlg. 1,167 ft.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 72)

Timmis et als' No. 2 Garner, 330 ft. from N line and 330 ft. from E line SW SW, Sec. 113, Blk. 4, I.&G.N. ... Drlg. 2,920 ft.

CASTRO COUNTY

Colorado O. & R. Co.'s No. 1 M. Siemmons, SW cor. Sec. 73, Blk. M-17, B.S.&F. Sur. ... Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 333, Blk. M-6, S.K.&K. Sur. ... S.D. 510 ft. for csg.

CHILDRESS COUNTY

C. L. Sloane et als' No. 1 B. P. Smith, Sur. 49, F. P. Knott lands ... S.D. 4,486 ft.

COCHRAN COUNTY

Continental Oil Co.'s No. 1 Slaughter-A, 330 ft. from W and 430 ft. from S lines, League 130, Carson County School land ... Drlg. 4,485 ft.

COTTLE COUNTY

Explin. Co.'s No. 1 Richards ... 1,000,000 ft. gas 3,720-30 ft; S.D. 4,000 ft.
Explin. Co.'s No. 3 Matador Land & Cattle Co., C, Sec. 46, J. H. Stephens Sur. ... C.O. 3,510 ft.
Sun Oil Co.'s No. 1 T. B. Yarborough, 485 ft. S and 2, 460 ft. E NW cor. Sec. 551, Blk. H, W.&N.W. Sur. .. Fish. 4,403 ft.

DONLEY COUNTY

Blue Bonnett Oil Co.'s No. 1 Ball, 1,075 ft. from N line, 985 ft. from E line, Sec. 22, Blk. E, D.&P.R.R. Sur. .. S.D. 1,912 ft.
Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk G. G.C.&S.F. Sur. ... S.D. 3,510 ft.
Southland Oil Co.'s No. 1 Lewis, C SE 40 ac., Sec. 3, Blk. 29, H.&G.N.R.R. Sur. ... Location.

GRAY COUNTY

British-American Oil Co.'s No. 2 Purviance, 330 ft. N and E SW cor. E 160 ac., Sec. 61, Blk. B-2, H.&G. N.R.R. Sur. ... Location.
Champlin Ref. and Danciger's No. 2 Cook-Faulkner, 860 ft. N and 330 ft. E, SW cor. W 120 ac. of E 200 ac., Sec. 30, Blk. B-2, H.&G.N.R.R. Sur. ... T.D. 2,775 ft; set 8¼-in. csg.; testing.
Champlin Ref. Co.'s No. 2 Jackson, 330 ft. each way from SE cor., W 100 ac., Sec. 60, Blk. B-2, H.&G.N... Sprayed 5 bbls; T.P. 2,920 ft; S.D. 3,420 ft.
Crabtree Drlg. Co.'s No. 1 B. F. Talley, SW NE, Sec. 114, Blk. M-2, B.S.&F. Sur. ... S.D. 2,740 ft.
Constantine et als' No. 1 Dial, 330 ft. S and E of NW cor. W½ NW, Sec. 32, Blk. 25, H.&G.N. Sur. ... S.D. 2,965 ft; encountered S.W.
Danciger O. & R. Co.'s No. 2 Beck, 330 ft. N and E SW cor. NW, Sec. 28, Blk. B-2, H.&G.N. Sur. ... T.D. 2,746 ft; set 8¼-in. csg.
Danciger O. & R. Co.'s No. 3 Beck, 330 ft. S and 990 ft. E NW, Sec. 28, Blk. B-2, H.&G.N.R.R. Sur. ... Fishing 2,667 ft.
Danciger O. & R. Co.'s No. 4 Beck, 330 ft. S and W, NE cor., Sec. 28, Blk. B-2, H.&G.N. Sur. ... Location.
Danciger O. & R. Co.'s No. 5 Beck, 330 f.. S and E, NW cor. SW, Sec. 28, Blk. B-2, H.&G.N. Sur. ... Location.
Danciger et als' No. 11 Jackson, 330 ft. S and 1,320 ft. W, NE cor. NW, Sec. 88, Blk. B-2, H.&G.N. Sur. ... Drlg. 2,591 ft.
Danciger O. & R. Co.'s No. 1 Williams, 330 ft. from N, 330 ft. from E, S½ NW ... S.D. 2,595 ft; run. 8¼-in. csg.
Delaney & Associates Oil Co.'s No. 8 Jackson, 990 ft. S and 330 ft. E NW cor. E½ SW, Sec. 88, Blk. B-2, H.&G.N.R.R. Sur. ... Cmtd. 8¼-in. csg; T.D. 2,150 ft.
Dye & Gillette's No. 2 J. L. Noel, 330 ft. N and E, SW cor. NE, Sec. 187, Blk. 3, I.&G.N. Sur. ... Drlg. 490 ft.
Bob Dunlap's No. 2 Morse, 990 f.. from N, 330 ft. from W, Sec. 2, Blk. 26 ... Drlg. 2,300 ft.
Empire G. & F. Co.'s No. 1 Noel, C SE, Sec. 151, Blk. 3, I.&G.N.R.R. Sur. ... Drlg. 2,845 ft.
Sines Q Reiger's, formerly Eslick et als' No. 1 Mrs. J. A. Hopkins, NW cor. W 80 ac. of SW, Sec. 84, Blk. B-2, H.&T.C. Sur. ... S.D. 3,206 ft.
Gardner Bros. and Collins' No. 2 Saunders, 955 ft. from S and 330 ft. from E of W 68 ac. E½, J. G. Eustice Sur. ... Location.
Gulf Prod. Co.'s No. 2 Saunders, 990 ft. N and E, SW cor. Sec. 3, Blk. 1, A.C.H.&B.R.R. Sur. ... Drlg. 2,451 ft.
Guernsey Oil Co.'s No. 1 Pope, 330 ft. from N and W lines, W½ SW, Sec. 173, Blk. 3, I.&G.N. Sur. ... Rigging up.
Herragan Oil Co.'s No. 1 Bradford, 330 ft. from N and 990 ft. from E, Sec. 123, Blk. B-2 ... Drlg. 300 ft.
Humble O. & R. Co.'s No. 1 Palmer, 330 ft. from N and E lines, of W 100 ac., Sec. 31, Blk. B-2, H.&G. N. Sur. ... Building rig.
Independent O. & G. Co.'s No. 1 Hollenbeck, 990 ft. each way from NE cor. NE, Sec. 176, Blk. 3, I.& G.N.R.R. Sur. ... 5,000,000 ft. gas from 2,428-83 ft.; S.O. 3,170-75 ft; fish. 3,220 ft.
Lyon et als' No. 1 Morse, 330 ft. N and E SW cor. N½ NE, Sec. 2, Blk. 26, H.&G.N.R.R. Sur. ... Drlg. 2,275 ft.
Magnolia Pet. Co.'s No. 1 Wright, 330 ft. S and W lines S½ SW, Sec. 13, Blk. 3, I.&G.N. Sur. ... Drlg. 2,140 ft.
McLain Oil Co.'s No. 1 Back, 1,000 ft. from W line and 330 ft from N line, NW, Sec. 24, Blk. 25, H.&G.N. Sur. ... 1,000,000 ft. gas 2,105-10 ft. and estimated 3,000,000 ft. gas 2,202-08 ft; show oil 2,565-90 ft. and 2,714 ft; shot 100 qts. 2,565-2,-829 ft; spraying 6 bbls. oil per day; S.D. 2,846 ft; C.O.
McMan O. & G. Co.'s No. 3 Palmer, 899 ft. N and 330 ft. W, SE cor. E 100 ac. of W 200 ac., Sec. 31, Blk. B-2, H.&G.N. Sur. ... Drlg. 2,725 ft.
McMan O. & G. Co.'s No. 4 Palmer, 899 ft. S and 330 ft. W, NE cor. of E 100 ac. of W 200 ac., Sec. 31, Blk. B-2, H.&G.N. Sur. ... Drlg. 1,375 ft.
McMan O. & G. Co.'s No. 5 Palmer, 330 ft. S, 930 f.. W, NE cor., E 100 ac. of W 200 ac., Sec. 31, Blk. B-2, H.&G.N. Sur. ... Spudding.
McMan O. & G. Co.'s No. 3 Saunders, 1,650 ft. N, 330 ft. E, SW cor., E 80 ac. of W 148 ac. of E 296 ac. of J. G. Eustis Sur. ... Run. 15½-in. csg. 266 ft.
Midwest Explin. Co.'s No. 2-B Bowers, 1,320 ft. from N, 330 ft. from E, Sec. 94, Blk. B-2, H.&G.N.R.R. Sur. ... Location.
Mordyan O. & G. Co.'s No. 2 Davis, 330 ft. from N, 990 ft. from E, S½ NW, Sec. 8, Blk. 1 ... Drlg. 1,760 ft.
Oil Operators' No. 1 Bowers, 330 ft. from N, 330 ft E, Sec. 93, Blk. B-2, H.&G.N. Sur. ... Show oil and gas 2,400-17 ft; S.D. 2,460 ft.
Operators Oil Co.'s No. 1 Lovett, 330 ft. from N and W line, W½ NE, Sec. 57, Blk. B-2, H.&G.N. Sur. ... Building rig.
Operators Oil Co.'s No. 5 Cook-Faulkner, 990 ft. N and 330 ft. W, SE of W 90 ac., Sec. 30, Blk. B-2, H.&G. N. Sur. ... Drlg. 2,650 ft.
Operators Oil Co.'s No. 6 Cook-Faulkner, 330 ft. S and E, NW cor., Sec. 30, Blk. B-2, H.&G.N.R.R. Sur. ... Show gas 2,424 and 2,477 ft; drlg. 2,512 ft.
Osborn et als' No. 1 Morse, 330 ft. N and E, SW cor. S½ NE. Sec. 1. Blk. 26. H.&G.N.R.R. Sur. ... Rig.
Panhandle Ref. Co.'s No. 3 Saunders, 330 ft. N and E, SW cor. E½ NE, Sec. 3, Blk. 1, A.C.H.&B. Sur. ... Location.
Phillips Pet Co.'s No. 1 Eakin, 330 ft. from S. 330 ft. from W, Sec. 56, Blk. 25, H.&G.N.R.R. Sur. ... Drlg. 1,890 ft.
Phillips Pet. Co.'s No. 1 Jackson, 330 ft. each way from NE cor. NE, Sec. 58, Blk. B-2, H.&G.N.R.R. Sur. . Show oil 2,712-23 ft; 250 ft oil in hole; set 5-in. csg. 3,018 ft; 7,000,000 ft. gas 3,130 ft; 1,000,-000 ft. gas 3,144 ft; T.D. 3,-145 ft.

Phillips Pet. Co.'s No. 2-A Jackson, 425 ft. S and E, NW NE, Sec. 88, Blk. B-2, H.&G.N.R.R. Sur. ..... Set 8¼-in. csg. 2,800 ft.
Phillips Pet. Co.'s No. 6 Palmer, 330 ft. S and W, NE cor., Sec. 31, Blk. 2, H.&G.N.R.R. Sur. ..... Rigging up.
Phillips Pet. Co.'s No. 7 Palmer, 990 ft. N and 330 ft. E, SW cor. E 183.1 ac. of Sec. 31, Blk. B-2, H.&G. N. Sur. ..... Drlg. 1,980 ft.
Phillips Pet. Co.'s No. 8 Palmer, 1,650 ft. N and 330 ft. E of SW cor. E 83.1 ac., Sec. 31, Blk. B-2, H.&G. N.R.R. Sur. ..... Drlg. 2,486 ft.
Prairie O. & G. Co.'s No. 1 Langham, 330 ft. N and E SW, Sec. 1, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,260 ft.
Quillian et als' No. 1 Barrett, 330 ft. from N, 330 ft. from E, Sec. 131, Blk. 3, H.&G.N. Sur. ..... T.D. 400 ft; set 15½-in. csg.
Shamrock Oil Co.'s No. 1 Clayton, 150 ft. from NE cor. of S 80 ac. of W 140 ac. of E 277 ac., Sec. 50, Blk. 25, H.&G.N. Sur. ..... Drlg. 2,330 ft.
Shamrock Oil Co.'s No. 2-J Chapman, 450 ft. from N, 150 ft. from E of W 41 ac. of E 319 ac. ..... T.D. 2,766 ft; 500,000 ft. gas 2,762-66 ft.
Sherwood et als' No. 1 Gething, 330 ft. N and W SE cor N½ NE, Sec. 14, Blk. A-9, H.&G.N. Sur. ..... Drlg. 1,810 ft.
Skelly Oil Co.'s No. 1 Jackson, 330 ft. from S and W lines E½, Sec. 62, Blk. B-2, H.&G.N.R.R. Sur. ..... Show gas 2,394-2,410 ft; S.O. 2,-907-17 ft; T.D. 3,020 ft; S.O. 2,-995-3,005 ft; swbd. 30 bbls. in 16 hrs.
Skelly Oil Co.'s No. 2 Jackson, 330 ft. S, 2,990 ft. W of W 160 ac., Sec. 90, Blk. B-2 ..... C.O. 2,929 ft.
Skelly Oil Co.'s No. 3 Jackson, 330 ft. from S and E lines of W 160 ac., Sec. 90, Blk. B-2, H.&G.N.R.R. Sur. ..... Standardizing 2,844 ft.
St. Clair Oil Co.'s No. 1 Dial, 330 ft. S and W NE cor. SE, Sec. 10, Blk. 25, H.&G.N.R.R. Sur. ..... Cellar.
St. Clair Oil Co.'s No. 1 Rowe, Sec. 32, Blk. R ..... S.D. 3,490 ft. hole full water.
St. Clair Oil Co.'s No. 1 L. S. Stockton, SE cor. Sec. 35, W. R. Lee Sur. ..... Spudded and S.D.
Sun Oil Co.'s No. 3 Purviance, 250 ft. from S, 287 ft. from W, Sec. 61, Blk. B-2, H.&G.N.R.R. Sur. ..... S.O. 2,850 ft; T.D. 2,935 ft; swbng. 30 bbls. per hr; T.P. 2,891-95 ft.
The Texas Corp.'s No. 10 Bowers, 330 ft. from N and E lines of E½, Sec. 89 ..... Drlg. 2,870 ft; show gas 2,787-2,-850 ft; S.O. 2,860 ft.
The Texas Corp.'s No. 12 Bowers, 330 ft. from N and 330 ft. from W of NE, Sec. 63, Blk. B-2 ..... T.D. 2,935 ft; run. 5 3-16-in. csg.
The Texas Corp.'s No. 13 Bowers, 990 ft. from N and 330 ft. from W line E½, Sec. 89, Blk. B-2, H.&G. N.R.R. Sur. ..... Drlg. 2,770 ft; 2,000,000 ft. gas 2,-660 ft; S.O. 7,770 ft.
The Texas Corp.'s No. 3 Bruce Bull, 330 ft. from N, 330 ft. from W. Sec. 2, Blk B-2 ..... Drlg. 2,445 ft; 8,000,000 ft. gas 2,-340-50 ft.
The Texas Co.'s No. 3-B Chapman, 330 ft. S and E, NW cor. SE, Sec. 69, Blk. 25, H.&G.N.R.R. Sur. ..... Location.
The Texas Co.'s No. 2 Comb-Worley, 330 ft. N and 2,310 ft. W SE cor. S½ S line, Sec. 36, Blk. 3, I.&G.N. Sur. ..... 5,000,000 ft. gas 2,835-50 ft. and 70,000,000 ft. gas 2,884 ft; T.D. 2,915 ft; sprayed 52 bbls. first 24 hrs; T.P. 2,915 ft; fish. 2,916 ft; T.P. 2,915-16 ft; flowing 310 bbls. in 24 hrs.
The Texas Co.'s No. 3 Comb-Worley, 330 ft. N and W SE cor. Sec. 36, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,865 ft.
The Texas Co.'s No. 4 Comb-Worley, 330 ft. N and 1,736 ft. W SE cor. Sec. 36, Blk. 3, I.&G.N. Sur. .... Drlg. 2,020 ft.
The Texas Corp.'s No. 4 Cook-Faulkner, 1,973 ft. from W line and 330 ft. from N line of W 160 ac., Sec. 29, Blk. B-2, H.&G.N. Sur. ..... Fish. 2,835 ft.
The Texas Co.'s No. 2 McLarty-B, at center of J. M. Rose Sur. ..... T.D. 2,619 ft; 20,000,000 ft. gas 2,-405-60 ft.
The Texas Co.'s No. 3 Shaw, 330 ft. N and E of SW of E 279 ac., Sec. 5, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,060 ft.
The Texas Co.'s No. 6 Williams, 330 ft. S and E, NW cor. NE, Sec. 6, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 935 ft.
White Eagle O. & R. Co.'s No. 1 Faulkner, 330 ft. each way from SE cor. of E 60 ac., Sec. 29, Blk. B-2, H.&GN Sur ..... Drlg. 2,180 ft.
P. A. Thorpe's No 1 Finley, 3,416 ft. from S and 330 ft. from W of B. F. Chaney Sur. ..... Fishing 900 ft.
Wilcox-Pampa Oil Co.'s No. 8 Comb-Worley, 330 ft. NW SE SE, Sec. 60, Blk. 3, I.&G.N. Sur. ..... First gas 2,675 ft; S.O. 2,755 ft; S.O. 2,780-85 ft; T.D. 2,965 ft; swbd. 250 bbls. in 24 hrs. from 2,935-65 ft.
Wilcox-Pampa Oil Co.'s No. 9 Combs-Worley, 330 ft. S and E, NW cor. NE SW, Sec. 35, Blk. 3, I.&G.N.R. R. Sur. ..... Drlg. 2,275 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood, 320 ft. from N and W lines, League 7, Wilbarger County School lands; elevation 3,363 ft; contract depth 5,000 ft. ..... Drlg. 3,220 ft.

BARTLEY COUNTY

Amarillo Oil Co.'s No. 9 Lee Bivins "A," C NW, Sec. 6, Blk. 21 ..... Show oil 3,780 ft.; 100,000 ft. wet gas 3,990 ft.; T.D. 4,145 ft.; to plug back; P.B. 3,835 ft.

HUTCHINSON COUNTY

Amarillo Oil Co.'s No. 2 Ingerton-A, 1,650 ft. from N line, 1,071 ft. from E line, Sec. 41, H.&T.C.R.R. Sur. ..... 50,000,000 ft. gas at 1,300 ft; set 8-in. csg. 2,800 ft; 500,000 ft. gas 1,660 ft; 7,000,000 ft. gas; U.R. 6-in. csg. 2,835 ft.
Alamosa Oil Co.'s No. 4 Sanford, 310 ft. S and 320 ft. W, NE cor. of N 160 ac. of S 240 ac., Sec. 85, Blk. 46, H.&T.C. Sur. ..... Drlg. 975 ft.
Continental Oil Co.'s No. 1-B Johnson, 330 ft. S and W, NE cor. NW, Sec. 6, Blk. 1, B.&B. Sur. ..... Location.
Devore Oil Co.'s No. 1 Johnson Bros., 330 ft. from S and E line, NW SW, Sec. 28, Blk. Y, A.&B. Sur. .... Drlg. 320 ft.
Holmes et als' No. 2 Quinn, 990 ft. from S line and 330 ft. from E line SW, Sec. 7, Blk. 9, I.&G.N. Sur. ..... Drlg. 2,560 ft.
Holmes et als' No. 3 Moore, 990 ft. N and 330 ft. E, SW cor. E½ SE, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. . Spudded and S.D.
Huey et als' No. 3 Smith et al, 330 ft. from N and 600 ft. from W of S 40 ac. of E 100 ac., SE, Sec. 12, Blk. Y ..... Drlg. 400 ft.
McMan O. & G. Co.'s No. 2 Sanford, 300 ft. from W line and 315 ft. from S line N 274 ac., Sec. 83, Blk. 46, H.&T.C. Sur. ..... T.D. 3,153 ft; T.P. 3,025-30 ft; to shoot.
Midwest Expltn. Co.'s No. 2 Moore, 330 ft. from S, 1,320 ft. from W, Sec. 125, Blk. 4, H.&G.N. Sur. ..... Drlg. 1,570 ft.
O. B. Penney's No. 2 Johnson Bros., 330 ft. from S line, 330 ft. from W line W½ NE, Sec. 35, Blk. Y, A.&B. Sur. ..... $1,000,000 ft. gas 1,990 ft; drlg. 2,310 ft.
Pennowa Oil Co.'s No. 3 Smith, 330 ft. S and W, NE NW Sec. 7, Blk Y, N&C Sur. ..... Drlg. 420 ft.
Phillips Pet. Co.'s No. 1 Cheatham, 427 ft. N and 330 ft. W SE cor. SE SE, Sec. 38, Blk. Y ..... Drlg. 2,275 ft.
Phillips Pet. Co.'s No. 1 Johnson Bros., 330 ft. from N and W lines NW, Sec. 34, Blk. Y, A.&B. Sur. ..... Pay 2,951-72 ft; initial prod. 30 bbls. oil and 5,000,000 ft. gas; C.O. 2,972 ft.
Phillips Pet. Co.'s No. 1 Johnson-Kotz, 350 ft. N and 330 ft. E SW W ½ SW, Sec. 35, Blk Y ..... S.D. 1,926 ft.
Phillips Pet. Co.'s No. 4 Johnson, Sec. 28, Blk. Y, A.&B. Sur. ..... 2,000,000 ft. gas; set 8-in. csg. at 2,826 ft.
Phillips Pet. Co.'s No. 6 (Florence), 330 ft. each way from S and W lines, E½ ..... T.D. 2,876 ft; T.P. 2,805 ft; I.P. 70 bbls; shot 54 qts. 2,788-2,828 ft; fishing csg.
Prairie O. & G. Co.'s No. 4 Cal Merchant, 5,612 ft. S 330 ft. E, NW, Sec. 37, Blk. 47, H.&T.C.R.R. Sur. ... Set 12-in. csg. 777 ft.
Prairie O. & G. Co.'s No. 4 Shaw, 330 ft. S and 990 ft. W NE cor., Sec. 27, Blk. Y ..... S.D. 2,675 ft.
Skelly Oil Co.'s No. 2 Lee Bivins, 306 ft. from E and 1,342 ft. from S line, S 160 ac. of N 320 ac., Sec. 84, Blk. 46, H.&T.C.R.R. Sur. ..... S.D. 205 ft.
Skelly Oil Co.'s No. 3 Whittenburg, 330 ft. from S and 2,230 ft. from W, Sec. 22, Jameson Sur. ..... Drlg. 2,610 ft.
Skelly Oil Co. No. 7 Whittenburg, 330 ft. from S and 1,570 ft. from W lines, Sec. 22, Jameson Sur. ..... T.D. 2,959 ft; top pay 2,918 ft; swbng. 142 bbls.
Sunny Jim Oil Co.'s No. 3 Pitts, 330 ft. N and W, of most southerly SE cor., Sec. 9, Blk. M-21, T.C. Sur.. Location.
The Texas Company's No. 2 Quinn, 990 ft. N, 330 ft. E SW cor. E½, Sec. 7, Blk. 9, I.&G.N. Sur. ..... Drlg. 2,370 ft.
Travelers Oil Co.'s No. 2 Cockrell, 350 ft. from E and S line, Sec. 8, Blk. B-3, D.&S.E. Sur. ..... Drlg. 420 ft.

KING COUNTY

Huff Oil Co.'s No. 1 Martin, 1,320 ft. from N line and 1,320 ft. from E line, Sec. 171, Blk. F. H.&T.C. Sur.. Rig.

LAMB COUNTY

Dan Freed et als' No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... Drlg. 2,700 ft.

LIPSCOMB COUNTY

Brown et als' No. 1 Box T Ranch, SW NE, sec. 611, H.&T.C. Sur. ..... S.D. 3,210 ft.
Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... S.D. 4,570 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small show oil 1,133-40 ft.; sand; fishing 4,167 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 1 Read-A, C NW, Sec. 14, Blk. 13-12, D.&P. Sur. ..... Fishing 1,975 ft.
Amarillo Oil Co.'s No. 1 Perkins-A, 330 ft. each way out of NW cor. NE, Sec. 76, Blk. 3 ..... Drlg. 775 ft.
Red River Gas Co.'s No. 1 J. M. Shelton, 330 ft. each way from SE cor., Sec. 52, Blk. 3, G.&M. Sur. ..... Location.
Dana O. & G. Co.'s No. 1 Anthony, C NW, Sec. 260, Blk. 44, H.&T.C.R.R. Sur. ..... Drlg. 1,000 ft.
Dana O. & G. Co.'s No. 1 Road-A, C NW, Sec. 14, Blk. B-12 ..... Location.
Fritch O. & G. Co.'s No. 1 Lee Bivins, C NE 40 ac. of N 160 ac., Sec. 4, Geo. Mahan Sur. ..... 2,000,000 ft. gas 1,550-65 ft; U.R. 10-in. csg. at 2,060 ft.
Phillips' No. 1 Wilson, 330 ft. each way out of NW cor. S½ SE, Sec. 157, Blk. 3-T ..... Drlg. 2,720 ft.

MOTLEY COUNTY

Explin. Co.'s No. 5 Matador, C, Sec. 45, Blk. J-B, C. B.&C.N.G.R.R. Sur. ..... S.D. 529 ft.
Explin. Co.'s No. 6 Matador, 330 ft. from N line and 330 ft. from E line, Sec. 132, Blk. M ..... Drlg. 720 ft.
Matador Oil Corp.'s No. 1 Owen, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... Drlg. 580 ft.

RANDALL COUNTY

W. A. Patterson's No. 1 Palo Duro, Sec. 60, Blk. K-14 ... S.D. 1,250 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. 5-A ... S.D. 5,975 ft.

WHEELER COUNTY

Angus et als' No. 1 Linkey, C NE NW, Sec. 126, Blk 33... S.D. 450 ft.
Byrens et als' No. 1 Johnson, SW cor. NE, Sec. 88, Blk. A-5, H.&G.N. Sur. ..... S.D. 2,920 ft.
Fain et als' No. 2 Binkley & Cain, C SE, Sec. 5, Blk. 34, H.&G.N. Sur. ..... T.D. 2,520 ft; first gas 2,324 ft; S.O. 2,430 ft.
Johnson et als' No. 1 Hicks, C NW SW, Sec. 49, Blk. 17, H.&G.N.R.R. Sur. ..... S.D. 1,400 ft.
Johnson & Wisch Kamper's No. 1 West, C NE NW, Sec. 30, Blk. 17, H.&G.N. Sur. ..... S.D. 2,290 ft.
Lone Star Gas Co.'s No. 3 Burcham, C NE SE, Sec. 91, Blk. 17, H.&G.N. Sur. ..... Drlg. 1,200 ft.
Magnolia Pet. Co.'s No. 1 Laycock, 653 ft. from W and 660 ft. from N, SE, Sec. 9, Blk. 27, H.&G.N.R.R. Sur.. Rigging up.
Osage Dev. Co.'s No. 1 Purcell, C SE NE, Sec. 51, Blk. 17, H.&G.N. Sur. ..... S.D. 1,000 ft.
Upham Gas Co.'s No. 1 Ladd, C NE, Sec. 97, Blk. 23, H.&G.N. Sur. ..... Drlg. 1,350 ft.
Upham Gas Co.'s No. 1 Shelton, C SE NE, Sec. 23, Blk. 24, H.&G.N.R.R. Sur. ..... Drlg. 480 ft.
Vaughn et als' No. 3 Ackley, 330 ft. from N, 330 ft. from W. Sec. 4, Blk. 27, H.&G.N. Sur. ..... Drlg. 1,250 ft.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 54)

National Oil Co.'s No. 1, A. Hanger Williams League.... Set 70 ft. surface csg. on rock.
W. J. Kelly's No. 1 Burke..... Changing to heavier rig 280 ft.
Marshall & Moore's No. 1 John A. Kerr..... Drlg. 2,485 ft.

GOLIAD COUNTY

Western Union Oil Co.'s No. 1 Lucas, Juan Moya y Delgado Sur. ..... Location.

GONZALES COUNTY

Joe Bruner's No. 1 R. D. and J. C. Miller..... Moving in boiler 2,713 ft.
Crown Petroleum Co.'s No. 1 Hattenback..... Drlg. 2,400 ft.
Finnell & Elam's No. 1 Robinson, Liverpool Survey..... Standing 1,260 ft.
Hoffman and others' No. 1 Steubing, John Smith Survey.. Shut down 4,105 ft.
Linderman Brothers' No. 1 F. H. Frampton..... Shut down 1,160 ft.
Fort Bend Oil Co.'s No. 1 C. E. Ham..... Drlg. 2,670 ft.
Frank Sorrell's No. 2 Wilkenson..... Standing 174 ft.

GUADALUPE COUNTY

Burgess' No. 1 Lennen ..... Rigging up.
W. E. Clark and others' No. 1, Survey M. Miller..... Dropped from reports.
A. G. Kifer's No. 1 B. B. Dix..... Drlg. 1,380 ft.
Sinclair Oil & Gas Co.'s No. 1 Ed Tewes..... Drlg. 1,710 ft.
L. W. Stieren's No. 1 S. H. Herman, Ragsdale Survey... Standing 1,233 ft.
R. R. Penn's ..... Location announced later.
Adams-Lyles-Walton's No. 1 Zoluroski, Jesus Cantu Sur... Spudded in.

HAYS COUNTY

E. A. Bucklin's No. 1 ..... Moving in machinery.

JIM HOGG COUNTY

Deep Rock Oil Co.'s No. 1 Kelsey ..... Drlg 300 ft.

JIM WELLS COUNTY

E. W. Ogden's ..... Spudding in.
Magnolia Pet. Co.'s No. 1 C. Cook, W. H. Sartain Sur., Blk. 45 ..... Rigging up.

KARNES COUNTY

L. B. Flowers' No. 1 R. L. Barnett, 4 mi. NE Karnes City. Moving in rig.
Hurador Oil Co.'s No. 1 W. E. Porter..... Drlg. 2,160 ft.
Scott Townsend and others' No. 1 Ruckman..... Standing 2,500 ft.

KERR COUNTY

L. R. Page and Associates' No. 1 Real.. ..... Drlg. 3,154 ft.

KIMBLE COUNTY

Carl L. Bryant's No. 1 C. E. Lambert..... Drlg. 150 ft.
H. A. McLean & Jamison's No. 1 R. F. Cannon..... Shut down 995 ft.
J. B. Lindsay's No. 1 G. C. Anderson..... Drlg. 785 ft.

KINNEY COUNTY

Lloyd Oil Co.'s No. 1 G. B. Moore, Survey 117..... Set csg. 1,653 ft.; total depth 1,-675 ft.

LASALLE COUNTY

J. G. Nix's No. 1 Coleman, Survey 68..... Standing 500 ft.

MAVERICK COUNTY

Ryan Consolidated Petroleum Co.'s No. 2 Indio Ranch....Drlg. 5,065 ft.
Rycade Oil Co.'s No. 3 Chittim.....Drlg. 4,435 ft.
Rycade Oil Corp.'s No. 4 J. M. Chittim.....Drlg. 3,755 ft.t
Rycade Oil Co.'s No. 4 Sullivan.....Drlg. 4,070 ft.
Rycade Oil Corp.'s No. 5 Chittim .....Clearing land for rig.
The Texas Company, 5 miles west Darling Switch.....Rigging up.

MEDINA COUNTY

Zig Zag Oil Co.'s No. 1 San Antonio Irrig., Kemp, Sur...Drlg. 2,121 ft.
Pat Armstrong's No. 1 C. W. Butts.....Derrick.
California-Medina's No. 1 Rothe.....Drlg. 3,426 ft.
Pearson Oil Co.'s No. 3 Irrigated Farms, Lot A-1, Blk. 3 .....Drlg. 1,210 ft.
Pearson Oil Co.'s No. A-2 Irrigated Farms, Lot A-4, Blk 3 .....Abandoned dry.
Rawdon-Hughes and others' No. 1 Bendele, Survey 593..Dropped from reports.
Rawdon-Hughes and others' No. 2 Bendele.....Dropped from reports.
Trapshooter Reilly Oil & Royalties Co.'s No. 1 Adams, L. Fritz Sur. .....Spudded in.

MILAM COUNTY

J. M. Burkhead's No. 1 C. Weigham.....Drlg. 1,967 ft.
E. L. Chapman's No. 1 Johnson, J. J. Acosta Sur. .....Shut down 1,385 ft.
E. L. Chapman's No. 1 E. G. Knight.....Made drill stem test; tested dry 400 ft.
Diggs and others' No. 1 Nolen .....Derrick.
Hill & Bonwell's No. 1 B. Booher, James Welch Survey..Drill stem stuck; 2,007 ft.
Lloyd Oil Corp.'s No. 1 Camp, Acosta Sur. .....Derrick.
Lloyd Oil Corp's No. 1 San Clement, Fakes Sur. .....Location.
Wilson and others' No. 1 Johnson & Stiles.....Location.
Elbert Williams' No. 1 Tom Shigut.....Shut down 2,000 ft.
Milam Oil & Gas Co., 4 miles southeast of Rosebud.....Drlg. 600 ft.
J. W. Stiff's No. 1 M. Winston, J. Leal Sur. .....Location.
A. H. Wray's No. 1 D. D. Fowler.....Setting casing 302 ft.

McMULLEN COUNTY

Natt Holman's No. 1 Shiner, H. M. Brewer Survey.....Drlg. 1,057 ft.

NUECES COUNTY

Nueces River Basin Dev. Co.'s No. 1 F. C. Allen.....Drlg. 3,780 ft.
Pearson and others' No. 1 Bluntzer.....Standing 3,507 ft.
R. & G. Corp.'s No. 1 Emily Wright Perkins.....Standing 3,510 ft.
R. & G. Corp.'s No. 1 Roberts.....Location.
R. & G. Corp.'s No. 1 Ragland.....Standing 3,003 ft.
Trinity Drillers and Sun Co.'s No. 1 Tompkins .....Rigging up.

SAN PATRICIO COUNTY

Magnolia Petroleum Co.'s No. 1 C. Freeman, Sec. 57 ....Drlg. 2,300 ft.
Houston Gulf Gas Co.'s No. 3 Welder.....Drlg. 4,786 ft.

STARR COUNTY

Smith & Adams' No. 1 Welch, Pedernal Sur. ..... Drlg. 200 ft.
Ohio Oil Co.'s No. 1 Bass, Por. 76, Blk. 71 .....Drilling.
Milam Drlg. Co.'s No. 5 R. Allen, Blk 147 .....Location.
U. S. Oil & Gas Co.'s No. 1 Kelsey, Por. 74, Blk. 11 .....Standing.

TRAVIS COUNTY

J. W. Allen's No. 1 McAngus, Westbrook Sur. .....Location.

WEBB COUNTY

O. W. Killam's No. 6 Billings .....Total depth 2,504 ft.; abandoned.
G. S. Lumpkin's No. 1 H. Yeager, Por. 33-34-35 .....Location.
Usher Carson's No. 2 D. Benavides Sur. 1,613 .....Resumed drlg. 1,005 ft.

WILLIAMSON COUNTY

J. C. Hawkins, 1½ miles northwest discovery well. ....Location.

WILSON COUNTY

Grayburg Oil Co.'s No. 1 Tigler, Parrott Sur. .....Drlg. 1,000 ft.

ZAPATA COUNTY

National Oil Co.'s No. 1 D. B. Adams .....Standing 690 ft.
Buck & Coursey's No. 1 Garza, Blk. 47 .....Drlg. 1,474 ft.
Buck & Coursey's No. 1 Trevino, Sur. 1 .....Drlg. 450 ft.

ZAVALA COUNTY

Tritex Oil Co.'s No. 1 Clay Burns.....Drlg. 780 ft.
Tritex Oil Co.'s No. 4 West.....Drlg. 795 ft.
Tritex Oil Co.'s No. 1 Childress.....Drlg. 1,095 ft.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 56)

Humble & Valley's No. 1 Graneau .....Location.
Humble & Valley's No. 2 Bellville School .....Bailed dry and abandoned 3,455 ft.
Humble & Valley's No. 3 Bellville School .....Derrick.
Humble & Valley's No. 2 Woodley .....Drlg. sand, shale and shell 3,078 ft.
Humble & Valley's No. 2-A Grawunder .....Drlg. plug 1,214 ft.
Humble & Valley's No. 2-B Grawunder .....Swabbing 31 bbls. fluid, 14 per cent b.s. and water hourly; sand 3,266 ft.
Humble & Valley's No. 3 Grawunder .....Rig.
Humble & Valley's No. 2-C Grawunder .....Derrick.
Humble & Valley's No. 3 Reese .....Swabbing 3,516 ft.
Humble & Valley's No. 4 Gotosky .....Drlg. sandy shale 2,843 ft.
Humble & Valley's No. 3 Sherrill .....Drlg. shale and lime 897 ft.
Humble & Valley's No. 1 Kraualiski .....Abandoned 1,105 ft.
Humble & Valley's No. 2 Beal .....Drlg. shale 167 ft.
Humble & Valley's No. 3 Payne .....Spudded.
Humble & Valley's No. 4 Urban .....Derrick.

DE WALT—FORT BEND COUNTY

Humble Oil & Refg. Co.'s No. 5 Nelson .....Drlg. sand and boulders 2,685 ft
Humble Oil & Refg. Co.'s No. 5 Camp .....Drlg. shale 3,195 ft.
Humble Oil & Refg. Co.'s No. 7 Brazos .....Preparing to resume drilling after blowout and fire; 3,000 ft.
Humble Oil & Refg. Co.'s No. 8 Brazos .....Rig.
Humble Oil & Refg. Co.'s No. 9 Brazos .....Drlg. sand and boulders 793 ft.
Humble Oil & Refg. Co.'s No. 3 Hamner fee .....Location.
Humble Oil & Refg. Co.'s No. 5 Hamner fee .....To test oil sand 3,519-34 ft.
Humble Oil & Refg. Co.'s No. 6 Hamner fee .....Location.
Humble Oil & Refg. Co.'s No. 7 Hamner fee .....Drlg. sandy shale 3,326 ft.
Humble Oil & Refg. Co.'s No. 2-A Bankers Mortgage .... Rig.
Humble Oil & Refg. Co.'s No. 2 Dew Bros. .....Sticky shale 3,473 ft.
Humble Oil & Refg. Co.'s No. 9 Sugarland .....Drlg. sticky shale 1,705 ft.

HUMBLE—HARRIS COUNTY

Humble Oil & Refg. Co.'s No. 2 Williams, south .....Blew in while bailing open hole; flowing 72 bbls. pipe line oil hourly through 1⅝-in. choke; gravity 42.3 degrees at 82 degrees; sand 3,790 ft.
Humble Oil & Refg. Co.'s No. 3 Williams .....Cemented 9⅝-in. casing 3,800 ft.
Humble Oil & Refg. Co.'s No. 1 Glass, south .....Drlg. hard sand 4,599 ft.
Marland Oil Co.'s No. 1 Ceseaux, south side .....Swabbing 100 bbls. daily 4,520 ft.
Navarro Oil Co.'s No. 1 La. Oil Refg. Corp. .....Location.
Harvey Smith et al's No. 1 Rosenthall, north side .....Set 217 ft. 4¾-in. screen and tubing 3,985 ft.; flowed water with some oil.
South Texas Petroleum Co.'s No. 7 Morris .....Drlg. shale 4,787 ft.; tried to blow out.
South Texas Petroleum Co.'s No. 8 Morris .....Drlg. shale 4,806 ft.
South Texas Petroleum Co.'s No. 9 Morris .....Cemented 9¼-in. casing 4,313 ft.; bottom 4,400 ft.
South Texas Petroleum Co.'s No. 1 Lee, south flank .....Location.
Sun Oil Co.'s No. 47 River, north side .....Drlg. shale 5,612 ft.
The Texas Company's No. 40 Stevenson .....Blew in flowing 300 bbls. net oil 5,073 ft.; caught fire and burned for 2 hours.
The Texas Company's No. 263 Landslide, south .....Standing 4,985 ft.
The Texas Company's No. 265 Landslide, south .....Drlg. sand and shale 4,475 ft.
The Texas Company's No. 266 Landslide .....Drlg. sand and lime 4,310 ft.
The Texas Company's No. 39 C.O.&G. .....Set 9 joints screen 3,185 ft.; flowed 900 bbls., 3 per cent water.
The Texas Company's No. 25 Koehler .....Drlg. sand and shale 4,310 ft.
The Texas Company's No. 22 House .....Rig.
West Production Co.'s No. 1 Foster .....Location.

BLUE RIDGE—FORT BEND COUNTY

J. S. Abercrombie's No. 9 West-Schenck, old well .....Drlg. 4,391 ft.
Gulf Production Co.'s No. 7 Invincible (old well) .....Comp. flowing 500 bbls. oil 4,377 ft.
Gulf Production Co.'s No. 16 Luscher .....Drlg. gumbo and lime 2,160 ft.
Moody Corp.'s No. 8 West-Schenck .....Drlg. sand and shale 5,016 ft.
Navarro Oil Co.'s No. 1-C Robinson, northwest .....Set 3 joints screen 4,251 ft.; flow 64 bbls. an hour.
Sinclair Oil & Gas Co.'s No. 3 Davison (workover) .....Strainer stuck 4,632 ft.; shut down.
South Texas Petroleum Co.'s No. 1 Lee (workover) .....Set strainer 4,854 ft.
South Texas Petroleum Co.'s No. 2 Davison (workover) ..Comp. pumping 50 bbls. oil 3,570 ft.

PIERCE JUNCTION—HARRIS COUNTY

Abercrombie & Harrison's No. 1 Ritter .....Drlg. 3,925 ft.; total depth 5,558 ft.
Anderson & Plummer's No. 5 Whitehead, old well .....Tested salt water 5,644 ft.; sidetracking 3,383 ft.
Gulf Production Co.'s No. 23 Taylor (workover) .....Rigging up to deepen.
Gulf Production Co.'s No. 29 Taylor (work-over) .....Pulling screen to deepen 4,513 ft.
Gulf Production Co.'s No. 30 Taylor, east .....Drlg. gumbo 3,363 ft.
Moody Corp.'s No. 2 Calvert, northeast .....Drlg. gumbo 4,490 ft.
Navarro Oil Co.-Humble Oil & Refg. Co.'s No. 4 Dooley, east .....Drlg. water sand 4,909 ft.
Navarro Oil Co.-Texas Exploration Co.'s No. 16 Dooley, east side .....Comp. flowing 500 bbls. 2 per cent b.s. and water; 2 joints screen set 4,665 ft.; gravity 31.5 degrees.
Navarro Oil Co.'s No. 4-B Cain .....Drlg. sandy shale 4,932 ft.
Pure Oil Co.'s No. 1 Herman estate, southwest .....Pulling screen 4,992 ft.
Rio Bravo Oil Co.'s No. 11 B. Settegast .....Drlg. gumbo and lime 1,444 ft.
Rio Bravo Oil Co.'s No. 8-A Settegast (old well) .....To pump 4,512 ft.
Rio Bravo Oil Co.'s No. 10-A Settegast (workover) .....Pulling lines to deepen.
Rio Bravo Oil Co.'s No. 14-A Settegast, west .....Repairing rig after fire 5,075 ft.
Saxet Gas Co.'s No. 2 Herman estate, southwest .....Cemented 6⅝-in. csg. 4,215 ft.
Saxet Gas Co.'s No. 3 Herman estate, southwest .....Tested dry 4,357 ft.; sidetracking 3,600 ft.
Saxet Gas Co.'s No. 4 Herman (southwest) .....Location
Saxet Gas Co.'s No. 5 Herman (southwest) .....Location
J. F. Barron's No. 3 Fitzsimmons .....Derrick.
Shaw & Texas Exploration Co.'s No. 2-F Fitzsimmons....Derrick.
T. G. Shaw's No. 1 Dooley .....No report.

LIBERTY—LIBERTY COUNTY

Liberty Oil & Sulphur Co.'s No. 2 Monroe .....Standing 512 ft.
Empire Gas & Fuel Co.'s No. 3 Goggan .....Drlg. gumbo 3,126 ft.
Empire Gas & Fuel Co.'s No. 4 Goggan .....Derrick
Empire Gas & Fuel Co.'s No. 5 Goggan .....Location
Painter Oil Co.'s No. 2 Turner .....Standing 679 ft.
Navarro Oil Co.'s No. 2 Gulf .....Drlg. sticky shale 1,260 ft.
Navarro Oil Co.'s No. 5 Baldwin Community .....Rig.
Sun Oil Co.'s No. 46 Mitchell .....To pump 3,372 ft.
Sun Oil Co.'s No. 47 Mitchell .....Drlg. gumbo 2,596 ft.
Talley & O'Brien's No. 1 Deussen .....Drlg. shale 1,286 ft.
The Texas Company's No. 3 Pickett .....Started to come in but sanded; sand 4,890 ft.; total depth 5,174 ft.

HULL—LIBERTY COUNTY

Empire Gas & Fuel Co.'s No. 27 Barngrover, old well....Drlg. 3,056 ft.
Gulf Production Co.'s No. 39 Phoenix, old well .....Comp. pumping 20 bbls. pipe line oil 2,222 ft.
Gulf Production Co.'s No. 49 Phoenix, old well .....Drlg. sand 3,124 ft.
Humble Oil & Refg. Co.'s No. 11 Hooks-Spell .....Drlg. shale and lime 1,766 ft.
Republic Production Co.'s No. 35 Dolbear (workover)....Rig up to deepen.
Republic Production Co.'s No. 68 Dolbear (old well).....Comp. flowing 1,500 bbls. 2,594 ft.; on fire.
Republic Production Co.'s No. 99 Dolbear (workover) ....To deepen.
Republic Production Co.'s No. 107 Dolbear (old well)....No report.
Republic Production Co.'s No. 109 Dolbear (workover) ...To deepen.
Republic Production Co.'s No. 114 Dolbear (old well)....Drlg. 2,732 ft.
Republic Production Co.'s No. 128 Dolbear (workover) ...To deepen.
Sun Oil Co.'s No. 11 Carr .....Drlg. 466 ft.
The Texas Company's No. 1 Hannah-Vacuum (workover).Drlg. 2,912 ft.
The Texas Company's No. 8 Hannah-Vacuum .....Location

BIG CREEK—FORT BEND COUNTY

Benedum & Trees' No. 2 Ahlers .....Cemented casing to test oil sand 3,689 ft.
Gulf Production Co.'s No. 30 Davis (old well) .....Swabbed salt water 3,627 ft.; to deepen.
Gulf Production Co.'s No. 55 Davis .....Rig up.
The Texas Company's No. 2 Wheat (old well) .....Drlg. sticky shale 3,569 ft.
Navarro Oil Co.'s No. 4 Davis .....Location.

NASH—BRAZORIA COUNTY

Rycade Oil Corp.'s No. 26 Wisdom .....Sandy lime 4,648 ft.

BATSON—HARDIN COUNTY

Acorn Oil Co.'s No. 71 Paraffine .....Set casing to test oil sand 1,088 ft.
Ada Belle Oil Co.'s No. 128 Paraffine .....Tested salt water and abandoned 1,163 ft.
Capitol Oil Co.'s No. 11 Hodges .....Shut down 3,190 ft.
W. G. Christian's No. 2 Millholme .....Drlg. 1,326 ft.
Paraffine Oil Co.'s No. 46 Paraffine .....Standing 1,248 ft.

SOUR LAKE—HARDIN COUNTY

Austin et al's No. 1 Watson .....Location.
Humble Oil & Refg. Co.'s No. 6 Bashara (old well) ....Sidetracking 1,868 ft.
Lake View Oil Co.'s No. 62 Hardin .....Rig.
United Oil & Fuel Co.'s No. 1 Brown .....Drlg. 1,232 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 79-C .....Drlg. sticky shale 213 ft.
E. W. Skinner's No. 15 Kirby .....Shut down 1,502 ft.

ORANGE—ORANGE COUNTY

Brownie-Babbett Oil Co.'s No. 2 McLean, old well .....Comp. pumping 25 bbls. oil 3,363 ft.
Gulf Production Co.'s No. 1 Morse-Granger et al (workover) .....Preparing to deepen.
Orange Petroleum Co.'s No. 8 Winfree (old well) .....Rig up to deepen.
Rex Petroleum Co.'s No. 7 Carbello, old well .....Testing oil sand 3,342 ft.
Tillery Oil Co.'s No. 2 State (workover) .....Shut down 3,027 ft.

GOOSE CREEK—HARRIS COUNTY

Gulf Production Co.'s No. 25 Ashbel Smith (workover) .....Drlg. sand and boulders 3,062 ft.
Humble Oil & Refg. Co.'s No. 75 Simms-Smith .....Waiting cement to set 4,243 ft.
C. T. Rucker's No. 1 Jones .....Drlg. 1,331 ft.
Lake Shore Oil Co.'s No. 4 Duke .....Drlg. 1,892 ft.
Lee & Scott's No. 3 Scott .....Drlg. 1,061 ft.
Jim McMurry's No. 3 Grace Addey (old well) .....Drlg. 2,685 ft.
Lube Well Oil Co.'s No. 1 Dannenbaum, old well .....Rig up to deepen.
Newton & Lillie's No. 3 Schilling, old well .....Rig up to deepen.

SPINDLETOP—JEFFERSON COUNTY

Sun Oil Co.'s No. 11 McLean (workover) .....Drilling.
Yount Lee Oil Co.'s No. 69 McFaddin (workover) .....Fishing screen to deepen 3,136 ft.
Yount Lee Oil Co.'s No. 54 McFadd'n (old well) .....No report.
Yount Lee Oil Co.'s No. 108 McFaddin .....Cemented casing 3,603 ft.
Yount Lee Oil Co.'s No. 109 McFaddin .....Set screen to test sand 3,908 ft.
Yount Lee Oil Co.'s No. 110 McFadden .....Drlg. sand and pyrites 3,738 ft.
Yount Lee Oil Co.'s No. 111 McFaddin .....Drlg. gumbo 2,733 ft.
Yount Lee Oil Co.'s No. 112 McFaddin .....Drlg. gumbo 2,559 ft.
Yount Lee Oil Co.'s No. 113 McFaddin .....Drlg. gumbo 2,202 ft.
Yount Lee Oil Co.'s No. 36 Gladys City (workover) ....Abandoned.
Yount Lee Oil Co.'s No. 43 Gladys City (workover) ....Comp. flowing 475 bbls. fluid, 200 bbls. oil 2,951 ft.
Yount Lee Oil Co.'s No. 94 Gladys City .....Comp. flowing 185 bbls. oil 4,120 ft.
Yount Lee Oil Co.'s No. 95 Gladys City, old well .....Waiting cement to set 2,893 ft.
Yount Lee Oil Co.'s No. 2 Fee .....Drlg. sand 3,974 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Humble Oil & Refg. Co.'s No. 3 Smith ..... Drlg. shale 2,840 ft.
Marland Oil Co.'s No. 1 Hogg ..... Derrick.
Saxet Oil Co.'s No. 1 Hogg ..... Drlg. 800 ft.; set 10-inch surface casing.
Saxet Oil Co.'s No. 1 Masterson ..... Rig.
The Texas Company's No. 24 Arnold ..... Drlg. shale 2,734 ft.

HIGH ISLAND—GALVESTON COUNTY

Gulf Production Co.'s No. 4-A Smith ..... Rig.
Marrs McLean's No. 6 Cade (old well) ..... To deepen.
Marrs McLean's No. 11 Cade (old well) ..... Abandoned; total depth 3,774 ft.
Marrs McLean's No. 15 Cade ..... Pulling strainer to deepen 3,741 ft.
Marrs McLean's No. 16 Cade ..... Rig.

DAMON MOUND—BRAZORIA COUNTY

Cullen & West's No. 1 Smith ..... Reaming hole; bottom in heaving shale 4,543 ft.
Sinclair Oil & Gas Co.'s No. 6 Norton ..... Trying to set 350 ft. screen; heaving shale 4,403 ft.
Leonard Petroleum Co.'s No. 4 Wisdom ..... Drill stem stuck; shut down in hard lime 3,320 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 19 Moore ..... Sidetracking in sticky shale 3,995 ft.

NORTH DAYTON—LIBERTY COUNTY

Fort Bend Oil Co.'s No. 1 Ballarack ..... Shut down 4,650 ft.
Harrison Oil Co.'s No. 4 Quintette ..... Sticky shale showing oil 4,034-68 ft.; to test.

REFUGIO—REFUGIO COUNTY

George Ball's No. 1 Terrell (workover) ..... No report.
Morgan Oil Corp.'s No. 1 City ..... Drlg. broken lime 2,575 ft.
Morgan Oil Corp.'s No. 1 Fox heirs ..... Derrick.
Hewitt et al's No. 1 Cemetery ..... Derrick.
Houston Gulf Gas Co.'s No. 5 Ryals ..... Drlg. gumbo 2,800 ft.
Houston Gulf Gas Co.'s No. 9 Lambert ..... Comp. flowing 75,000,000 ft. gas.; 1,400 pounds pressure; sand 3, 573-77 ft.
Houston Gulf Gas Co.'s No. 6 Shelly ..... Testing sand 5,035 ft.
Houston Gulf Gas Co.'s No. 3 Rose Lambert ..... Waiting cement to set 3,648 ft.
Houston Gulf Gas Co.'s No. 5 O'Brien ..... Rig.
Houston Gulf Gas Co.'s No. 2 Rooke ..... Cleaned hole 4,530 ft.; to deepen.
Houston Gulf Gas Co.'s No. 1 Buckley ..... Fishing drill pipe 2,680 ft.
Houston Gulf Gas Co.'s No. 1 Morgan-Skelly ..... Drlg. 500 ft.
Korona Oil Co.'s No. 1 West ..... Derrick.
Mission Drilling Co.'s No. 1 Shay ..... Comp. flowing 200 bbls. pipe line oil; sand 3,660-64 ft.
Mission Drlg. Co.'s No. 1 O'Brien ..... Drlg. 4,267 ft.
Mission Drlg. Co.'s No. 2 Powers ..... Drlg. plug to test sand 3,506-10 ft.
Mission Drlg. Co.'s No. 1 J. F. B. Heard ..... Working over after blowout 4,088 ft.; total depth 4,630 ft.
Mission Drlg. Co.'s No. 2 Skelly ..... Derrick.
Mission Drlg. Co.'s No. 1 Strauch ..... Derrick.
Mission Drlg. Co.'s No. 1 Fox (workover) ..... Rig up.
Benedum & Trees' No. 4 Clint Heard ..... Putting on gas lift 3,695 ft.
Saxet Co.'s No. 5 Clint Heard ..... Cemented 6⅝-in. casing 3,653 ft.; bottom 3,658 ft.
Saxet Co.'s No. 9 Claude Heard ..... Set surface casing 508 ft.
Houston Oil Co.'s No. 1 Rea ..... Cemented surface casing 475 ft.
Houston Oil Co.'s No. 12 Rooke ..... Comp. flowing 200 bbls. pipe line oil; sand 3,686-93 ft.
Houston Oil Co.'s No. 6 Wilson Heard ..... Swabbed salt water 3,692 ft.; to sidetrack.
Houston Oil Co.'s No. 8 Wilson Heard ..... Rig.
Blanco Creek Oil Co.'s No. 1 St. Johns ..... Shut down 3,700 ft.
W. L. Pearson trustee, No. 1 Fox ..... Dry gas sand 3,693 ft.
W. L. Pearson, Trustee' No. 1 Simpson ..... Comp. flowing 550 bbls. pipe line oil; sand 3,722-37 ft.
Sun Oil Co.'s No. 2 Rea ..... Drlg. plug to test sand 3,654-64 ft.
Texas Gas Co.'s No. 1 Rogers ..... Shut down for water 1,600 ft.
Union Exploration Co.'s No. 2 Rooke ..... Drilling 700 ft.

SOUTH LOUISIANA FIELDS
LOCKPORT—CALCASIEU PARISH

Shell Petroleum Corp.'s No. 1 Miller ..... Cemented 8¼-in. casing 6,682 ft.; sand showing oil.
Vacuum Oil Co.-Gulf Refg. Co.'s No. 9 Miller ..... Comp. flowing 700 bbls. fluid, 45 per cent water, 4,380 ft.
Vacuum & Gulf's No. 15 Miller ..... Tested salt water 4,370 ft.; milling out 3,597 ft.
Vacuum & Gulf's No. 3 State ..... Flowed salt water on air 4,400 ft.; to rework.
Vacuum Oil Co.'s No. 7 Bordages ..... Drlg. sand 2,874 ft.
Vacuum Oil Co.'s No. 3-A fee ..... Drlg. hard sandy lime 2,422 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 7 Dorion, East Hackberry ..... Location.
Calcasieu Oil Co.'s No. 2 Lemke, East Hackberry ..... Coring sand showing oil 3,995 ft.
Calcasieu Oil Co.'s No. 15 Watkins, East Hackberry ..... Tested salt water 3,871 ft.; to sidetrack.
Fraim Oil Co.'s No. 1 Duhon, Old Hackberry ..... Standing 4,384 ft.
Moon Oil Co.'s No. 4 Sanner, Old Hackberry ..... Comp. pumping 75 bbls. oil 3,156 ft.
Rycade Oil Corp.-Humble Oil & Refg. Co.'s No. 3 Gulf Land, Old Hackberry ..... Drlg. sand and shale 3,233 ft.
Sunshine Oil Co.'s No. 2 Ellender, Old Hackberry ..... Waiting cement to set 3,321 ft.
The Texas Company's No. 5-B Calcasieu Lake, East Hackberry ..... Drlg. hard rock 3,142 ft.
Yount Lee Oil Co.'s No. 9 School Land (Old Hackberry) ..... Coring 3,556 ft.

JENNINGS—ACADIA PARISH

Fred Getty's No. 3 Jennings-Clemont ..... Location.
Kathleen Oil Co.'s No. 1 Syndicate fee ..... Drlg. 2,461 ft.
E. L. Meyers' No. 1 Clemont-Zigler (old well) ..... To work over 1,805 ft.
The Texas Company's No. 5 Rayne Heirs (King tract) ..... Drlg. salt water sand 1,600 ft.
Yount Lee Oil Co.'s No. 4 Crowley, northeast flank, Section 48-9s-2w ..... Waiting drill stem; cement setting 7,546 ft.
Yount Lee Oil Co.'s No. 5 Crowley, Sec. 48-9s-2w ..... Location.
Yount Lee Oil Co.'s No. 7 Houssiene-Latrielle, Sec. 47-9s-2w ..... Drlg. lime and shale 5,137 ft.

EDGERLY—CALCASIEU PARISH

C. M. Crotty's No. 15 Lillard ..... Drlg. 1,896 ft.
Rex Petroleum Co.'s No. 10 Hunter ..... Tested salt water 4,249 ft.; deepened to 4,296 ft. and reset liner.

VINTON—CALCASIEU PARISH

Gulf Refining Co.'s No. 48 Star Vincent, Sec. 34-10s-12w ..... Rig.
Marrs McLean's No. 4 Gray (work-over) ..... Tested dry 1,787 ft.; shut down.
Salt Dome Oil Co.'s No. 2 Shaw ..... Rigging up to pump 2,859 ft.
Vinton Petroleum Co.'s No. 14 Gray (work-over) ..... Shut down 2,659 ft.
Vinton Petroleum Co.'s No. 9 Rescue (9 acres) ..... Tested salt water 3,088 ft.; to deepen.

BAYOU BOUILLON—ST. MARTIN PARISH

Rycade Oil Corp.'s No. 7 Bouillon fee ..... Drlg. hard sand rock 4,196 ft.
Rycade Oil Corp.'s No. 3 State (former well) ..... Cleaned hole; to resume drilling 3,583 ft.

SORRENTO—ASCENSION PARISH

Gulf Refining Co.'s No. 15 United, Sec. 22-10S-4e ..... Drlg. hard sand and boulders 4,134 ft.

STARKS—CALCASIEU PARISH

Gulf Refining Co.'s No. 15 Lutcher-Moore ..... Standing in heaving shale 6,134 ft.
Gulf Refining Co.'s No. 13 Industrial ..... Drilling shale 7,207 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 736 fee ..... Fishing drill pipe 6,064 ft.
Union Sulphur Co.'s No. 746 fee, Sec. 29-9s-10w ..... No report.
Union Sulphur Co.'s No. 748 fee, Sec. 29-9s-10w ..... Comp. flowing 1,875 bbls. pipe line oil; gravity 20.9 degrees; sand 4,055 ft.
Union Sulphur Co.'s No. 749 fee, Sec. 29-9s-10w ..... No report.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 7 Yount Lee ..... Drlg. sand and shale 6,113 ft.
Pure Oil Co.'s No. 8 Yount Lee ..... Shut down.

ANSE LA BUTTE—ST. MARTIN PARISH

Yount Lee Oil Co.'s No. 5 Louisiana Pet. Co. ..... Waiting cement to set 3,624 ft.; oil sand.

MISCELLANEOUS WILDCATS
TEXAS
AUSTIN COUNTY

Whittington et al's No. 1 Lass, 4 miles northwest of Bellville ..... No report.

BRAZORIA COUNTY

Thomas Faust et al's No. 4 fee ..... Drlg. red gumbo 1,783 ft.
Empire Gas & Fuel Co.'s No. 3 Brock, Stratton Ridge ..... Sand and lime 4,910 ft.; drill stem stuck.

CHAMBERS COUNTY

Chicago Oil Corp.'s No. 1 Lawrence ..... Shut down in gumbo 1,200 ft.
Layne et al's No. 1 Fitzgerald ..... Shut down in rock 2,635 ft.
Pure Oil Co.'s No. 3 Mayes, Lost Lake ..... Tested salt water 2,152 ft.; to deepen.

FORT BEND COUNTY

Gulf Production Co.'s No. 12 Trone, Long Point ..... Drlg. sandy shale and lime 3,691 ft.
Grayburg Oil Co.'s No. 1 Ranson ..... Drlg. sand 2,922 ft.
Humble Oil & Refg. Co.'s No. 1 Miller, Rosenberg ..... Drlg. sand, lime and shale 5,224 ft.

HARRIS COUNTY

Baldwin and associates' No. 1 Kitzman, Cypress ..... Set 84 ft. 3-in. screen 4,055 ft.; tested fresh water; standing.
A. F. Belunek's No. 1 Thompson ..... Started drilling.
Humble Oil & Refg. Co.'s No. 6 Warren Hockley ..... Drlg. gummy shale 1,384 ft.
Humble Oil & Refg. Co.'s No. 2 Irvin ..... Reaming sand and shale 4,189 ft.
Humble Oil & Refg. Co.'s No. 1 Woodburn, Genoa ..... Reaming; total depth 4,468 ft.
Paxton et al's No. 1 Brown, Wooster ..... Drlg. gumbo 1,910 ft.
York & Robertson's No. 1 Garrett, Harris & Carpenter Survey ..... No report.

JEFFERSON COUNTY

Bleakie Oil Co.'s No. 1 Tolliver, Dyches Survey ..... Shut down 2,800 ft.
Deep Test Oil Corp.'s No. 1 Faith-McFadden ..... Shut down 3,706 ft.
Gulf Production Co.'s No. 3 Burrell Fannette ..... Sidetracking rock 2,486 ft.; drill stem stuck 2,511 ft.
Gulf Production Co.'s No. 1 Junker, Fannette ..... Rig.
Gulf Production Co.'s No. 7 Bordages, Fannette (workover) ..... Drlg. hard sand 5,655 ft.
Gulf Production Co.'s No. 11 Thomas, Fannette (workover) ..... Set 3-inch strainer 5,636 ft.; total depth 5,895 ft.
Nederland Oil & Dev. Co.'s No. 1 Young, Nederland ..... Shut down 2,520 ft.
River Oil Corp.'s No. 1 Ship Channel, Brown Survey ..... Shut down; gumbo 1,721 ft.
Shell Petroleum Corp.'s No. 1 Heisig, Hampshire ..... Drlg. hard sand 6,291 ft.
The Texas Company's No. 2 P'pkin, Big Hill ..... Drlg. sand and boulders 1,733 ft.
The Texas Company's No. 1 Burrell, Fannette ..... Location.
Vacuum Oil Co.'s No. 1 Herbert-Broussard, T.&N.O. Survey No. 208 ..... Drlg. shale 1,439 ft.
Westbury Oil Co.'s No. 1 West ..... No report.

LIBERTY COUNTY

Gulf Production Co.'s No. 2 Boyt Hankamer ..... Drlg. sand and shale showing oil 3,110 ft.
Humble Oil & Refg. Co.'s No. 5 Sterling, Moss Bluff ..... Abandoned in salt 4,622 ft.
Harvey Smith and associates' No. 1 Moore's Bluff, Brunson Sur. ..... To test oil sand 3,306-26 ft.; drill stem test showed 3 fourbles oil.
Pure Oil Co.'s No. 1 Liberty, Moss Bluff ..... Drlg. gumbo and lime 3,585 ft.
Union Exploration Co.'s No. 3 Esperson, Sheeks ..... Drlg. sand and boulders 1,230 ft.

MATAGORDA COUNTY

Crossland and associates' No. 1 Hawkins, Shepherds Mott. Set 100 ft. 4½-in. screen 4,850 ft.; tested salt water; waiting orders.

MONTGOMERY COUNTY

Kelley-Baker et al's No. 1 Juerges ..... No report.

ORANGE COUNTY

Gulf Production Co.'s No. 1 Sturks, Port Neches ..... Rig.
The Texas Company's No. 1 Polk, Port Neches ..... Derrick.
The Texas Company's No. 1 Starks, Port Neches ..... Drlg. gumbo and boulders 1,094 ft.
Veteran Oil Co.'s No. 1 Reed, A. Nelson Survey ..... Shut down 4,500 ft.

WALLER COUNTY

Kirby Petroleum Co.'s No. 1 Vaughn, San Felipe ..... Drlg. deeper from sand at 3,005 ft.

SOUTH LOUISIANA
ASCENSION PARISH

Pickard & Geisman's No. 1 Desire Breaux, Darrow ..... Shut down 3,778 ft.
Big Dome Drlg. & Dev. Co.'s No. 1 Reardom, Darrow ..... Total depth 4,747 ft.; standing with casing collapsed.
Triumph Oil Corp.'s No. 2 Lacey, Sec. 20-10s-4e ..... No report.

CALCASIEU PARISH

Wilfred LaHay's No. 2 James, Section 14-10s-13w ..... Shut down 3,365 ft.
J. O. Davis' No. 1 Mims, Section 20-9s-7w ..... Standing 5,600 ft.

CAMERON PARISH

Shell Petroleum Corp.'s No. 11 Watkins, Black Bayou ..... Cemented 6-in. casing 1,232 ft.; bottom 1,329 ft.
Shell Pet. Corp.'s No. 12 Watkins, Black Bayou ..... Drlg. sand 1,970 ft.
Shell Pet. Corp.'s No. 13 Watkins, Black Bayou ..... Location.
Shell Pet. Corp.'s No. 1 Marceaux, Mallard Bay, Section 32-12s-3w ..... Building derrick.
The Texas Company's No. 4-A Calcasieu Lake, Calcasieu Lake Dome ..... Building derrick.

EVANGELINE PARISH

The Texas Company's No. 1 Guillory Pine Prairie ..... No report.

IBERIA PARISH

Jefferson Lake Oil Co.'s No. 2 Lake Peigneur, Jefferson Island ..... Rig.
The Texas Company's No. 4-A Vermillion Bay ..... Building derrick.
Gulf Refg. Co.'s No. 10-Z State, Loreauville ..... Drlg. sand and shale 2,351 ft.

IBERVILLE PARISH

Shell Petroleum Corp.'s No. 3 Wilbert, White Castle ..... Cored hard sand 5,858 ft.
Standard Oil Co.'s No. 3 Wilbert, Bayou Blue ..... No report.
Standard Oil Co.'s No. 2 Schwing, Bayou Blue ..... No report.
Standard Oil Co.'s No. 3 Schwing, Bayou Blue ..... Location.
Standard Oil Co.'s No. 4 Schwing, Bayou Blue ..... Location.
Standard Oil Co.'s No. 5 Schwing, Bayou Blue ..... Derrick.

JEFFERSON DAVIS PARISH

Vacuum Oil Co.'s No. 2 DeVilbiss, Roanoke ..... Drlg. gumbo 1,700 ft.

PLAQUEMINE PARISH

The Texas Company's No. 2 Garden Island Bay, Sec. 107-23s-32e ..... Spudded.
Humble Oil & Refg. Co.'s No. 1 State, Sec. 2-20s-26e ..... Rig.
Humble Oil & Refg. Co.'s No. 1 Lake Washington, Township 20s-26e ..... Location.

ST. BERNARD PARISH

St. Bernard Oil & Gas Co.'s No. 1 fee, Sec. 15-14s-15e ..... Shut down 726 ft.

ST. MARTIN PARISH

Ohio Oil Co.'s No. 3 Martin, Hager Dome ..... Standing 4,490 ft.
The Texas Company's No. 1 fee, Hager Dome ..... Shut down.
The Texas Company's No. 2 St. Martin, Hager ..... Rig standing.

ST. TAMMANY PARISH

St. Tammany Oil Co.'s No. 2 Fritch'e, Sec. 35-8s-14e ..... Drlg. 2,306 ft.

TANGIPAHOA PARISH

Completion Oil Co.'s No. 1 Amos ..... No report.
Joan Development Co.'s No. 1 Hilton, Sec. 20-9s-9e ..... Shut down 3,985 ft.

TERREBONNE PARISH

The Texas Company's No. 2-A Dog Lake Bayou, 400 ft. south of No. 1 ..... Derrick.
The Texas Company's No. 1-B Dog Lake, Sec. 6-22s-16e ..... Drlg. rock 464 ft.
The Texas Company's No. 1 Taylor, East Bay Junop Dome ..... Rig; drlg. water well.
The Texas Company's No. 2-A Lake Barre, Section 30-21s-20e ..... Drlg. gumbo 1,200 ft.
The Texas Company's No. 2-B Bay Coon Road, Sec. 17-22s-18e ..... Set 20-inch casing 80 ft.
The Texas Company's No. 3-B Bay Coon Road, Sec. 17-22s-18e ..... Location.

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The FOAMITE Foam Generator goes into action without any fancy adjustments. You don't have to keep one eye on the pressure gauge. There's a wide range of water pressure in which this rugged fighter will function properly.

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Let us demonstrate FOAMITE Generators for you. A study may show that either Generators or a Generator System should have an important place in your scheme of protection against fire. Our representatives are located at points convenient to all principal producing and refining centers. American-La France and Foamite Corporation, Engineers and Manufacturers, Dept. F-31, Elmira, N. Y.

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1—Ease of installation.

2—Small and inexpensive foundation.

3—Small floor space.

4—Smooth operation with minimum of vibration.

5—High overall efficiency, the gas consumption being only 9 cu. ft. per B.H.P. hour at full load.

6—The engine is heavily built and can be converted for Diesel operation where the gas supply becomes inadequate.

7—A large number of compressor cylinder sizes is available for pressures of 25 to 1,000 pounds.

8—All engine and compressor cylinders have removable liners.

9—Compressor discharge valves are on the bottom and the cylinders are self-draining.

10—Force feed lubrication for all cylinders and bearings.

11—All engine valve cages are removable. The exhaust valve cages as well as the exhaust manifold, are water cooled.

12—A device is provided for stopping the engine if the lubricating oil supply fails.

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EASTERN FIELDS

(Continued from Page 68)

rigging up on the A. B. Mitchell farm. In Ripley district, the Parsons Oil & Gas Co. has shut down on the F. F. Starcher farm. In DeKalb district, Gilmer County, the Hope Construction & Refining Co. has a rig completed on the Wilt heirs farm. In the same district, the Hope Natural Gas Co. is rigging up on the O. W. Hardman farm. In the same district, the McCall Drilling Co. is building a rig on the B. F. Frymyer farm. In Otter district, Braxton County, H. C. Zogg has made a location on the A. M. Couger farm.

Lincoln County Tests

In Duval district, Lincoln County, the Penn Gas Co. has made a location on the Baptist Missionary Church lot. In Union district, the Allegheny Gas Co. has started to drill on the John Stowers & Co. farm. In Jefferson district, the United Fuel Gas Co. is drilling and starting 11 wells. In McComas district, Cabell County, the West Virginia Gas Corp. has started to drill on the Alice M. Swann farm. In the same district, the Empire State Gas Co. is due in the sand on the T. I. and A. B. Swann farm. In Scott district, Boone County, the United Fuel Gas Co. has part of the rig material at a location on the Horse Creek Land & Mining Co.'s tract and is building the road to the location for No. 3,983 on the same tract.

In Murphy district, Ritchie County, Haught & Co. has started to drill on the Church lot. In Clay district, the Aetna Oil & Gas Co. is fishing at 1,255 feet on the George T. Walters farm. In Sheridan district, Calhoun County, the Richter Oil Co. is drilling deeper on the G. W. Dye farm. In Troy district, Gilmer County, C. M. Bennett is rigging up on the Allen Burton farm. In the same district, the Carnegie Natural Gas Co. has made a location on the J. W. Rymer farm. In Geary and Walton districts, Roane County, the United Fuel Gas Co. is drilling and has rigs up for 10 wells. In Smithfield district, the United Carbon Co. has a rig up on the Bess Looney farm.

SOUTHWEST PEENNSYLVANIA

In Morris Township, Greene County, the Consumers Fuel Gas Co. completed in the Nineveh 30-foot sand No. 6 on the Thomas Anderson farm. It is dry in this and all upper formations. In Perry Township, the Convex Glass Co.'s test on the Albert Lemley farm is now through all sands and dry.

The Manufacturers Light & Heat Co. completed No. 2 on the Lewis Kuhn farm to the Fifth sand at 3,470 feet and has a gasser estimated at 300,000 feet. This is in Alleppo Township, Green County.

NEW COMMITTEES NAMED FOR CONTINENTAL OIL

D. J. Moran, president of the Continental Oil Co., recently merged with the Marland Co., has named a new operating committee, headed by W. W. Bruce, executive vice president.

Other members are: Baird H. Markham, comptroller and assistant to the president, vice chairman; J. J. Cosgrove, general counsel; E. J. Nicklos, vice president; Walter Miller, vice president; E. S. Karstedt, vice president, of Denver; G. F. Smith, treasurer; J. S. Curtis, district sales manager; W. H. O'Connor, general purchasing agent; Harry Moreland, manager of the pipe line department; T. D. Harris, manager of motor transportation, and P. R. Naylor, manager of the railway sales and traffic department. Miss A. C. Frazier is secretary.

The committee will hold meetings each Tuesday to pass by a majority vote the approval or disapproval of all recommendations for capital maintenance or replacement expenditures in excess of $400. The committee also must pass on budgets, cash forecasts and like items.

President Moran announces also a new manufacturing and sales committee to co-ordinate the refinery output and the sales requirements, supervise the crude oil and fuel oil purchase and sales, and establish a basis of monthly transfer schedules. The new committee is composed of E. T. Wilson, chairman; P. R. Naylor, vice chairman; Walter Miller, W. H. Ferguson, W. W. Bruce, E. S. Karstedt, J. S. Curtis and L. L. Davis.

Reorganization of the sales districts of the merged companies is announced. Forty-six districts, each under the supervision of a district superintendent, are consolidated in the 15 Conoco divisions. The districts embrace territory in Oklahoma, Arkansas, Kansas and Missouri. The six divisions of the former Marland company, located at Chicago, Milwaukee, New York City, Richmond, Kansas City and Ponca City, have been retained, and the Continental divisions at Denver, Pueblo, Salt Lake City, Spokane, Butte, Great Falls, Wichita Falls, Albuquerque and Lincoln have been reassigned, according to a recent bulletin, issued by L. R. Milne, Denver sales manager.

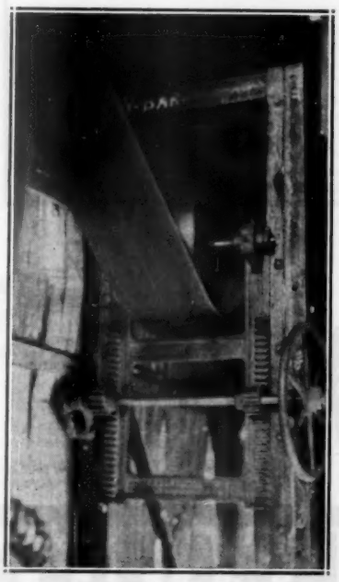
Confirmation of appointments of various department heads in the Ponca City offices of the Continental follow: R. R. Zimmerman, personnel manager; Harry Moreland, manager of the pipe line department; E. O. Bennett, chief engineer; W. H. O'Connor, general purchasing agent, and P. R. Naylor, manager of railway sales and traffic.

H. B. Simcox was appointed assistant manager of production; D. L. Cross, director of safety department; Dr. W. O. Armstrong, chief surgeon, George Fluke, superintendent of mailing and T. D. Harris, motor transportation department manager.

NOVEL WAY OF USING A BELT TIGHTENER SHOWN

A novel method of using a belt tightener has been made in the belt house of a pumping well on a Barnsdall Oil Co. lease in the Earlsboro area, as shown in the accompanying picture.

The steel angle iron frame is set in a concrete block placed at the bottom of the belt house and by bracing the side of the



frame to the belt house the belt tightener is held rigid.

The wooden band wheel used with the installation is made out of 1-inch plank and the ends of each plank are sawed to the radius of the wheel and then turned to make a smooth face for a belt. By this method and using the belt tightener it has been found that the power is applied in a more satisfactory manner and the belts have a much longer life than ordinarily.

The belt is made endless in the usual way and therefore presents a smooth surface to the idler pulley in the belt tightener.

Leader A NEW IMPROVED Leader
ALL STEEL DRAIN RACK
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Any model car can mount this Rack without interference.

TWO SIZES. Built in two sizes.

Fig. 616—Runways 9½" wide, 24" high; and

Fig. 626—Runways 9½" wide; 30" high.

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Fig. 616—Runways 9½" wide; 24" high:
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Fig. 626—Runways 9½" wide; 30" high:
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Is Your Derrick
Worn Out?

It shouldn't be. The photograph shows a Washington Type No. 50 Rotary Derrick drilling its 9th well. On the four completed wells, the shortest string of 8-1/4" pipe handled was 3521 feet. It is still in condition to drill a dozen more holes.

It is records like this that make Washington Structural Steel Derricks a real investment for the company that has no money to waste.

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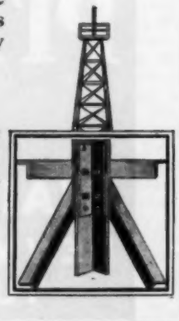

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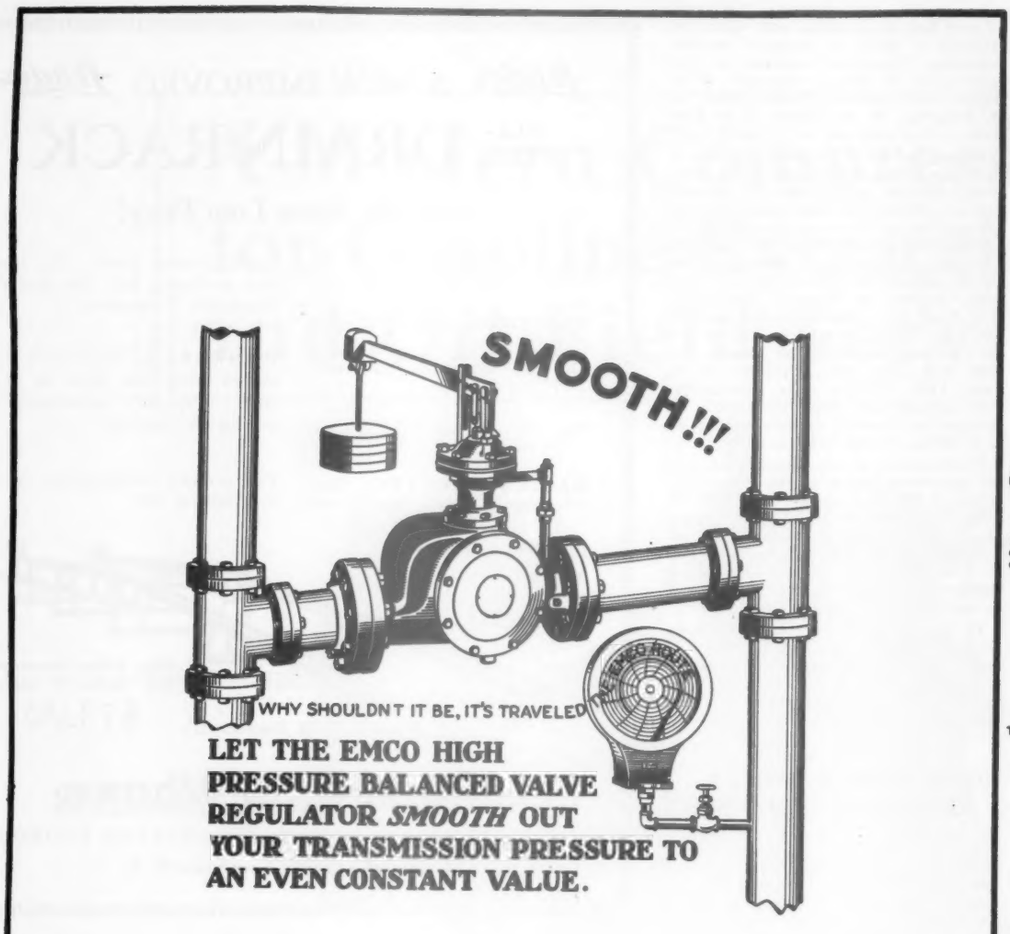
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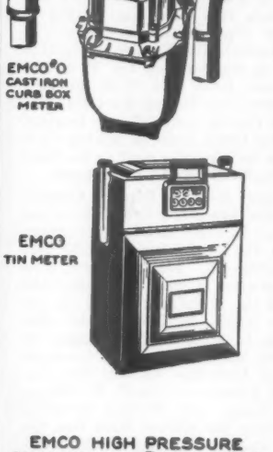
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CALIFORNIA FIELDS

(Continued from Page 64)

particularly interesting because of the proximity of this well to adjacent outcrops of heavy oil and an old asphalt mine which was worked some 40 or 50 years ago.

Point Conception

The Richfield Oil Co. has staked a location for a new wildcat to be located approximately 7 miles north of the Standard Oil Co.'s No. 1 Point Conception, which has been standing suspended for several weeks because of litigation involving the validity of leases. The Richfield's new prospect is located on a 2,000-acre lease on what is generally designated as the north structure at Point Conception. The Standard's project is on the south structure at Point Conception where the Richfield also controls approximately 800 acres. There are quite a number of independent operators prospecting at many points throughout Santa Barbara County and one or more of them may bear watching. The Keystone Petroleum is testing out the True ranch in Section 36-7-36 near Surf, a small station on the seacoast situated 6 miles north of Point Arguello, and the potentiality of this area should be determined within 30 days. The Gaviota Oil Co. is also prospecting in this vicinity and its first test at Lompoc will be spudded in within 10 days. The Ohio Oil Co. recently paid $25,000 for a lease on the Solsipuedes Rancho because of the showings logged in the Keystone's project and the large volume of natural gas found by the Western Gulf at Gaviota. C. W. Smith recently leased 1,150 acres in the Rancho Punta de la Guna area northwest of Orcut and a test is expected to be started soon. Smith acquired leases on 80 acres from E. L. Freedman, 130 acres from Frank Vincenti, 80 acres from Stella Elvidge, 120 acres from M. Ventura, 140 acres from J. K. Triplitt, 240 acres from J. R. Luiz, Charles Morrison and W. T. Lucas, 320 acres from C. F. Pitkin and 40 acres from Mary Armstrong. The Shell Oil Co., after drilling four structure survey holes at Betteravia, which area many operators do not consider favorable, will carry No. 5 down for a deep conclusive test.

Although Santa Barbara County has a special appeal to wildcatters because of the relatively shallow depth at which production is secured, other parts of the State are not being overlooked by any means. The Shell is testing ou the possibilities of the Lerdo area of Kern County, the General Petroleum south of McFarland, the Union at San Emedio, the Union, Shell and Standard at several points in Monterey County and the Union and Midwest Refining Co., the Huasna area of San Luis Obispo Co. The Petroleum Securities recently spudded in two wells in the Guijarral Hills, approximately 13 miles northwest of the discovery well at Kettleman Hills and 4,685 feet of hole was made in the first 35 days. This area has possibilities and may bear watching although it will undoubtedly require extremely deep drilling somewhat similar to Kettleman Hills. The Belridge Oil Co. has run into a strong gas pocket at North Belridge and the crew was forced to utilize hematite to prevent a blowout. The Edison district of Kern County, where the General Petroleum finished a small well yielding 19.1 gravity oil more than a year ago, is to be given additional development work in the very near future. Interest in this area was revived recently when The Texas Company staked location for a new test to be drilled in Section 23-29-27. It is the consensus of opinion that commercial production may possibly be developed in the Edison district of Kern County if water trouble can be overcome, as it will be recalled the General Petroleum battled this problem for a long time and was unable to solve this difficulty. The Rio Grande Oil Co. recently leased 5,000 acres of prospective oil land located 15 miles west of Kerman in Fresno County where the Associated Oil Co. drilled five dry holes several years ago. The Rio Grande's new holdings are located sufficiently removed from the Associated's acreage so it is not adversely affected by the previous wildcatting of the latter. The Associated was pretty well sold on the possibilities of this area at one time as evidenced by the five tests drilled. Calvin Pearson of Fresno, who is believed to represent several large operators, has just leased approximately 5,500 acres involving 135 separate leases. The property acquired is located about 3 miles north of Kerman and five miles from the Associated's holdings. The Chanslor-Canfield Midway Oil Co. is still interested in the Delano area and has acquired additional acreage from time to time.

Long Beach

Drilling operations at Long Beach resulted in the completion of nine wells and a check indicates the probable completion of several more in the near future. The Archer Oil Co. started off the week by recompleting No. 1 Regan doing 690 bbls. daily from 6,487 feet and the Continental Oil Co. followed up this success by finishing No. 2 Taylor, a new well, pumping 100 bbls. daily from the shallow zone at 4,451 feet. The Bush-Voorhis Oil Co. finished a good well by recompleting No. 1 Brennecke flowing 1,240 bbls. of clean 29.2 gravity oil daily from 6,454 feet. The Delaney Petroleum Co. put two wells on production, No. 8 Cerritos flowing 475 bbls. initially from 7,196 feet and No. 1 Just, a new well, 140 bbls. from 6,727 feet. The Richfield Oil Co. completed No. 4 Duncan, a new well, doing 1,540 bbls. from the Miocene at 7,103 feet, and the Shell followed suit by bringing No. 9 Patton Wilson making 655 bbls. from 6,585 feet. Warren & McCrate completed the largest well of the week when No. 1 MacKay, a new well, was finished flowing 1,595 bbls. of clean 28.9 gravity oil from 7,400 feet. H. C. Strader also finished a new well, although this project, No. 1 Signal, was completed in the shallow horizon at 4,759 feet, from which depth it registered an initial flow of 710 bbls.

The Continental Oil Co. increased its list of producers in the Richfield district by finishing two new wells, No. 7-A Pyne and No. 1 Mondotte. The former showed an initial of 315 bbls. daily from 4,450 feet, while the latter started off doing 330 bbls. from 4,425 feet. The Superior Oil Co. also completed a new well at Richfield when No. 1 Guarantee was brought in doing 210 bbls. from 4,341 feet, the hole having been finished with a 6⅝-inch oil string carrying 278 feet of perforated. Several new wells were spudded in at Richfield simultaneous with completion of the three new wells finished and preparations are being made to undertake still further work. Drilling operations at Seal Beach were not productive of any new wells, although several projects in that area should be tanking oil soon. Several potential producers are also scheduled for early completion in the Rosecrans Field of Los Angeles Basin due to work of the Barnsdall, Union and Sunset Pacific Oil Co., each of which has one or more deep holes under way.

Ventura Avenue

Three new wells were finished in the Ventura Avenue Field, the Shell completing two deep projects and the General Petroleum one. The largest was No. 41 Taylor of the Shell, which tanked 4,660 bbls. daily from 7,062 feet. No. 38 on the same lease started off flowing 2,620 bbls. daily from 6,950 feet, the oil being clean and testing 30.1 degrees. Both of these new producers required extra diligence during work. No. 38 blew in prematurely through 4-inch drill pipe while in No. 41 the crew only succeeded in running in 4,225 feet of the 5¾-inch oil string before the well started blowing. No. 12 Notten of the General Petroleum was somewhat of a disappointment as it showed an initial of only 165 bbls. daily from 7,234 feet. In the Maricopa section of the Midway-Sunset Field development work is rapidly increasing from week to week and several more holes will be started within 30 days. In the meantime we can anticipate the completion of perhaps five wells, most of which are located in Section 8-11-23 not far from the discovery.

CANADIAN FIELDS

(Continued from Page 60)

ished. McLeod's No. 3 made 1,329 bbls. in July. McLeod's No. 5, LSD 15, Section 1-20-3w5, is rigging up.

Regent Oil Co.'s No. 3, LSD 16, Section 1-20-3w5, has spudded in. Midfield Oil Co.'s No. 1, LSD 9, same section, is drilling before 2,450 feet with fair shows of light crude in the top of the Dakotas.

Calmont Oils' No. 1, LSD 2, Section 1-20-3w5, got a considerable flow of wet gas in the lime at 5,515 feet depth, and is reported making around 2,000,000 feet a day. Calmont's No. 3, same LSD, is reported rigging up.

New McDougall-Segur Oil Co.'s No. 1 is cleaning out hole at 2,495 feet and will drill to the deep lime if possible. Owing to badly damaged casing it may be necessary to start a new hole about 30 feet from No. 1 for the deep lime test. No. 2 is producing from the deep lime horizon at 5,385 feet. Roy Widney has taken charge of the drilling and is also handling the drilling for Widney Petroleums' No. 1, same section, which is drilling at 1,550 feet after encountering an apparent fault in the Bentons, the cardium sandstone repeating at 1,500. Sentinel Oil Co.'s No. 1, Section 8-20-2w5, is rebuilding rig.

New Tests

Three new tests are to be started in the Dallas lease in LSD 11, Section 20-19-2w5. These will be Nos. 7, 8 and 10.

East Crest Oil Co.'s No. 2, LSD 5-6, Section 16-19-2w5, is waiting for boilers to spud in.

Gasolite Oil & Development Co. has let contracts for rigs for two tests. No. 1 will be drilled in Section 3-19-2w5, in south Turner Valley, and No. 2 on the Paramount structure. Aerolite Oil Corp.'s No. 1, LSD 4, Section 3-19-2w5, is rigging up. Sunlight Oils' No. 2, LSD 2, Section 4-19-2w5, is digging cellar. Mercury Oils' No. 2, LSD 12, same section, is waiting for boiler to spud in.

In the north end of the field, Spooner Oils' No. 3, Section 24-20-3w5, is digging cellar. Hallmark Petroleums' No. 1, same section, is digging cellar. United Oils' No. 4, LSD 2, Section 24-20-3w5, is swedging at 5,385 feet, and bailing around 20 bbls. of light crude a day from the Dalhousie sand.

Model Oils' No. 1, LSD 8, Section 22-20-3w5, is standing at 5,235 feet with 10-inch hole and casing set at 4,271 feet. Some 30-gravity crude was struck at 5,210 feet, which caused caving. Efforts to cement were not successful, so 8-inch casing will be run and set on the lime, around 5,600 feet. A new 85-horsepower boiler has been set up and 8-inch casing is being unloaded. The test may have to be carried 6,000 feet to reach the crude naphtha horizon in the lime. Anaconda Oil Co.'s No. 1, LSD 16, same section, is rigging up.

Dalfin Petroleums' No. 1, LSD 5, Section 34-20-3w5, is rigged up. Vanalta Oils' No. 2, same section, is rigged up. Vanberta Oils' No. 1, SW, Section 35-19-3w5, has derrick up. Cameron Petroleums' No. 1, LSD 8, Section 36-20-3w5, is rigging up, to spud in about August 15.

Black Diamond Structure

Outwest Petroleums' No. 1, LSD 5, Section 35-19-3w5, is drilling in the top of the Kootenays at 2,550 feet, and is expected to set the 10-inch casing on top of the lime at 3,700 feet. Location is on the New Black Diamond structure, a fold distinct from the main Turner Valley anticline and about 2 miles west of it on Sheep Creek. The New Black Diamond structure is separated from the Turner Valley fold by a thrust fault which brings the Benton shales into contact with the top of the Belly River formation, indicating a throw of about 2,000 feet. The crest of the anticline appears near the NE corner of Section 34-19-3w5, and although the anticline is presumed to parallel that of Turner Valley, owing to absence of outcrops it cannot be traced north or south of Sheep River. Since the folding on the New Black Diamond anticline is less sharp than on the Turner Valley structure proper, the formations are not expected to lie so deep. Outwest's No. 1 is reported logging very close to Royalite's No. 4 in the Turner Valley, which got its crude naphtha recovery at a high point in the deep lime.

On the Waite Valley structure, Richfield Petroleum's No. 1, Section 35-20-3w5, is drilling close to the Dakotas at 1,900 feet, after shutting off a small gas flow struck at 887. Gibraltar Oils' No. 1, LSD 4, Section 28-20-3w5, has spudded in. Brock Petroleum's No. 1 (formerly Spartan No. 1), LSD 2, Section 35-21-4w5, has spudded in.

In the Highwood district, south of the Turner Valley, Warner Oils' No. 2, Section 28-18-3w5, has encountered strong oil and gas showings in the Dakotas. The drill entered the Dakota sand at 340 feet and got a show of light brown 48 gravity crude at 950 feet, with gas around 1,125 feet. The test is drilling in the Dakotas at 1,260 feet and is expected to get the top of the Kootenay around 1,350 feet. The test is drilling an 18-inch hole for 15½-inch casing. The gas flow, around 100,000 feet a day, was decidedly wet. Warner's No. 2 is approximately 3 miles west and 1 mile south of Imperial's Highwood No. 1. Drilling is being supervised by P. D. Mellon of the Canadian Western Natural Gas, Light, Heat & Power Co., of Calgary.

On the Herron structure, Herron Petroleum's No. 1 is reported spudding in. On the Ghost River structure, Baymar Oils' No. 1, NW, Section 5-26-6w5, has spudded in. Mogul Oils' No. 1, LSD 1, Section 19-27-6w5, has derrick up.

Hudson's Bay-Marland Oil Co. is reported rigging up a test on the Highwood structure.

Porcupine Hills

T. B. Stephens and associates, of Calgary, operating as the Porcupine Foothills Gas & Development Co., have filed on more than 4,000 acres on the eastern escarpment of the Porcupine Hills, 12 miles west of Claresholm. Tentative location has been made for No. 1 well. Part of the acreage was geologized by Joseph H. Sinclair in 1914 for the Claresholm Oil Co. A previous test drilled in 1913 got shallow gas production in small quantities. The prospective oil horizon is within 3,000 feet.

Devonshire Oil Co., which has been incorporated with office at Calgary, holds 1,220 acres scattered over the Highwood, New Black Diamond, Pumping Pond, Aldersyde, Sinclair and Blood Reserve structures. Devonshire's No. 1 has been spotted in LSD 2, Section 23-19-3w5, on the north end of the Highwood structure, about 2 miles west of the Home leases in south Turner Valley. Officers are: President, Herbert G. H. Glass; vice president, William Buxton; secretary-treasurer, Sydney R. Vallance; directors, Fred A. Dowler, Fred H. Mensinger, John M. Tangen, F. W. Hope, Dr. J. O. Baker.

Wainwright Field

In the Wainwright Field, east-central Alberta, drilling is exceptionally active, and a number of completions should be reported within a few weeks. Admiral Oils' No. 1, LSD 16, Section 36-44-7w4, has cored 13 feet of oil and to 2,073 feet, and set 8¼-inch casing at 2,060 feet, and will drill in as soon as cement has set. The test spudded in July 23. Anwood-Dome's No. 2, LSD 5, Section 18-44-6w4, had rotary derrick up. Daugherty Petroleums' No. 1 has rotary derrick up. Edalta Oils' No. 1 is rigging up with rotary close to the Saska-Wainwright's No. 1 producer. Fabyan Petroleums' No. 1, LSD 8, Section 24-45-8w4, is reported coring at 2,188 feet after encountering an oil saturated sand with heavy gas show. Hargal Oils' No. 1, LSD 13, Section 2-45-7w4, has derrick materials on location. Lloyd's Petroleum's No. 1, LSD 12, Section 6-45-6w4, has rotary derrick up. Maple Leaf Oil & Gas Co.'s No. 2, LSD 1, Section 24-45-8w4, is rigging up with rotary for a test for gas. Mid-Canada Oils' No. 1, LSD 6, Section 13-45-6w4, had derrick up. Sasko-Wainwright Oil & Gas Co.'s No. 2, LSD 8, Section 19-45-6w4, is rigging up for rotary test. T. J. Sugars Syndicate of Edmonton, is starting two

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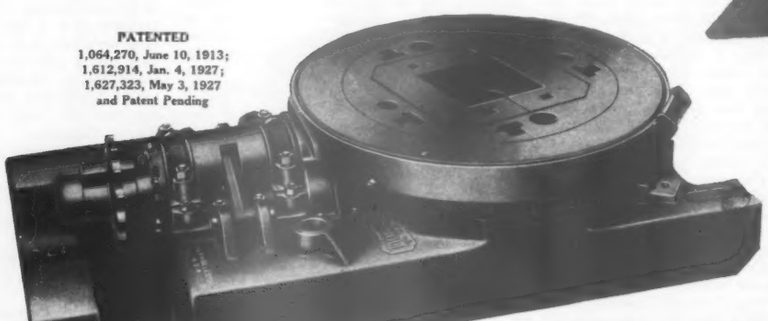

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tests. No. 1 has derrick up and No. 2 is hauling timbers to location. Hungerford Syndicate's No. 1, Section 29-48-10w4, is rigging up for rotary test 12½ miles north of Kinsells. Wainwell Oils' No. 4, LSD 15, Section 36-44-7w4, is rearranging pumping equipment; the test is in production at 2,051 feet and is reported probably good for around 200 bbls. a day. Wainwright Petroleums' No. 1, LSD 6, Section 30-45-6w4, has derrick up.

The field has now three wells in steady production, Edmonton-Wainwright Oils' No. 1, delivering 25 to 35 bbls.; Hargal Oils-British Petroleums' No. 3-B, delivering about 35 bbls., and Wainwell Oils' No. 3. Wainwell's No. 1 and 4 are potential producers. The crude is handled by the Associated Refineries' plant, with a capacity around 480 bbls. a day, and Wainwell Oils' refinery, with about half that capacity. Associated Refineries, Ltd., has been shipping considerable road oil to Saskatoon and Edmonton.

In the Viking Field, Northwestern Utilities' No. 17 has finished in the Viking sand with an estimated capacity of 5,500,000 feet a day.

In the Ribstone Field, London-Ribstone Syndicate's No. 1, LSD 14, Section 10-43-3w4, is down 2,433 feet with shows of oil and gas, but no commercial production. London-Ribstone's No. 2 has been located in LSD 5, Section 22-43-3w4, and rotary equipment is being moved in. Oxville Oil & Gas Co. has ordered rotary equipment for its No. 1, Section 10-46-2w4.

Skiff Field

In the Skiff Field, southern Alberta, Devenish Petroleums' No. 3, LSD 11, Section 11-5-14w4, is being given a pumping test under supervision of William Calder, Dominion government petroleum engineer. The well has been bailed and tubing run, but no actual estimate of production will be given out till the test is completed. Lion's Gate Oil Co.'s No. 1, Section 33-6-15w4, is reported spudding. Water wells drilled for these two tests checked higher than in the vicinity of the Devenish discovery well, indicating these locations are higher on the structure.

In the Cypress Hills Field, Eagle Butte Oil Co.'s No. 2, in Medicine Lodge Coulee, has spudded in. On the Red Coulee structure, west of Coutts, Ko-Tops Oils' No. 1, SE, Section 2-1-17w4, is rigged up ready to spud.

The Beverly Oil Syndicate, financed by Buffalo, Philadelphia, New York and Toronto interests and represented by H. Capewell of Toronto has tied up 1,356 acres in the border areas of southern Alberta. Acreage was selected by George H. Slipper of Calgary and William Graham of Toronto, and is located in the Sweetgrass, Skiff, Red Coulee, Milk River, Highwood and Wildcat Hills areas.

Ontario Fields

In the Ontario fields, Union Natural Gas Co.'s Ridgetown No. 3, Howard Township, Kent County, is finishing a dry hole below 1,900 feet. In Dover Township, Kent County, Union Natural Gas Co. is drilling a new Trenton test between Nos. 1 and 7 producers. Further east, Ajax Oil & Gas Co.'s No. 5 is reported drilling below 1,500 feet.

In the Dawn Field, Lambton County, Union Natural Gas Co.'s No. 40 is reported drilling around 1,300 feet. Union's No. 41 is waiting for a drilling crew to spud in.

In Dover Township, Kent County, Acme Oil & Gas Co., of Toronto, is preparing for a test midway between Ajax Oil & Gas Co.'s No. 4 producer and the Union producing wells farther west. The Acme company's holdings include 240 acres in Dover and 400 acres north of Thamesville, in Kent County; 1,000 acres in Colchester Township, Essex County, and 1,000 acres in Norfolk County. Officers of the Acme company include: President, A. M. Mahaffy, Toronto; vice president, E. P. Rowe, Toronto; directors, Dr. W. T. O. Parry, W. G. Rowe, P. A. Mackie; secretary-treasurer, George Freeman.

MICHIGAN FIELDS

(Continued from Page 62)

Wilson, trustee, on the No. 1 William Fenner, NE NW, Section 14-10-17, Laketon Township. Harold L. Fleeger has erected a rig for No. 1 Fleeger-Daniloff, SW SE, Section 5-10-16.

Mount Pleasant

The Pure Oil Co. and the Ohio Producing & Refining Co., two of the largest operators in the Mount Pleasant Field, shared the honors, bringing in two wells nearly the same size making 350 and 360 bbls. initial flow, respectively, in the Dundee pay.

The Ohio Producing & Refining Co.'s No. 1 Weidman, NE SW, Section 12-14n-3w, Chippewa Township, Isabella County, made 360 bbls. initial at 3,560 to 3,600 feet. It also makes about 100 bbls. a day as the only upper Traverse producer in the field. It produces between strings of casing from the Traverse and is the only well of this kind in Michigan.

The Pure Oil Co.'s No. 1 W. D. Gibson, SW NW, Section 12-14-3, Chippewa Township, made 350 bbls. initial at 3,559-90 feet.

The Ohio Producing & Refining Co.'s No. 1, on the Bailey-Hall, or Indian lease, will make a small pumper in the Dundee at 3,566-3,610 feet, although surrounded by better wells.

With 44 wells actually started or drilling, Mount Pleasant is seeing greater development activity than Muskegon.

There were nine new locations in and near the Mount Pleasant Field. Three are wells being drilled by the Sias Oil & Gas Co., Nos. 1 and 2 J. G. Brown, NE NE, Section 11-14-3, Chippewa Township, Isabella County, and No. 2 Carpenter, SW SW, Section 7-14-2, Greendale Township, Midland County. The Rockford Oil Syndicate has rigged up for No. 2 Harris, SE SW, Section 11-14-3, Chippewa Township. James M. Taggert's No. 1 Lee, NW NE, Section 12-14-3, also has been started.

The other four wells are on more or less wildcat locations: Wittmer Oil & Gas Co.'s No. 1 Zimmerman, SE NE, Section 8-10n-1w, Hamilton Township, Gratiot County; Denver Development Co.'s No. 1 Adams, NE SE, Section 35-15-3, Wise Township, Isabella County; Spigel Oil & Gas Co.'s No. 1 Lafayette Conrad, SE SE, Section 4-14-3, Chippewa Township; and the St. Louis Oil Co.'s No. 1 Woodberry, SE NW, Section 16-14-3, also Chippewa Township, Isabella County.

Two Newaygo County wells which were dry in the Dundee formation are drilling at about 3,200 feet on the way down as deep tests, the Newaygo Oil & Gas Co.'s No. 1 A. J. Bates, NE SE, Section 12-13-13, Sherman Township, and Uhl and Sarver's No. 1 David E. Uhl, NW SE, Section 20-13-12, Everett Township, south of White Cloud.

A show of oil was struck in the Sankey Oil & Gas Co.'s No. 1 Frank Darlington wildcat near Hesperia. The oil was found at 2,690 feet in the Dundee. The well is in SW SE, Section 9-14-15, Newfield Township, near the company's No. 1 G. A. Beam, NW SE, Section 22-14-15.

SOUTHWEST TEXAS FIELDS

(Continued from Page 54)

feet, 1,848 feet northwest line, 150 feet west line; total depth 2,349-53 feet; 75 bbls.

Caldwell County

Al Buchanan's No. 1 L. K. Brown, C. M. Cannon Survey, 1,500 feet south line, 150 feet west line; total depth 2,053 feet; first 12 hours gauged 37½ bbls.; first 36 hours at rate of 75 bbls. daily; oil 38.2 gravity.

Cranfill & Reynolds' No. 2-A J. L. Northcut, S. Shupe Survey, 300 feet southwest of No. 1; total depth 2,724 feet; 450 bbls.

Gulf Production Co.'s No. 5 J. L. Northcut, set 6⅝-inch casing 2,647 feet. Total depth 2,670 feet; 400 bbls. No. 7 J. L. Northcut, James Hinds Survey, total depth 2,691 feet; flowing 1,700 feet.

Humble Oil & Refining Co.'s No. B-2 Floy Gray (28-A), James Hinds Survey, 150 feet south and east lines; total depth 2,681 feet; 200 bbls. No. 8-B Moses & Baggett, S. Shupe Survey; total depth 2,669 feet; 300 bbls. No. 9-B Moses & Baggett; total depth 2,699 feet; 200 bbls. No. 10-B Moses & Baggett, S. Shupe Survey, 1,514 feet south line, 450 feet east line; total depth 2,699 feet; 150 bbls. No. 11-B Moses & Baggett, S. Shupe Survey, 1,050 feet south line, 750 feet east line; topped chalk 2,453 feet; total depth 2,681 feet; 125 bbls. No. 12-B Moses & Baggett, S. Shupe Survey, 450 feet south line, 1,050 feet east line; total depth 2,698 feet; 75 bbls. No. 2-A J. A. Northcut, James Hinds Survey, 450 feet south line, 150 feet east line; total depth 2,687 feet; small producer. No. 3-B J. L. Northcut, total depth 2,704 feet; 700 bbls. No. 1-B Clyant Smith, total depth 2,658 feet; 75 bbls. No. 2-B Clyant Smith, total depth 2,675 feet; 500 bbls.

Humble Oil & Refining Co. and Luling Oil & Gas Co.'s No. 5 C. F. Dye, 492 feet south line, 765 feet west line; total depth 2,674 feet; 225 bbls. No. 4-A Floy Gray, James Hinds Survey, 150 feet north line, 750 feet west line; total depth 2,680 feet; 200 bbls. No. 5-A Floy Gray, 150 feet north and west line; total depth 2,672 feet; swabbed 550 bbls. No. 7-A Floy Gray, James Hinds Survey, 150 feet south and west lines; total depth 2,647 feet; 600 bbls. estimate. No. 4-C Floy Gray, 571 feet north line, 750 feet west line; total depth 2,690 feet; 200 bbls.; No. 5-C Floy Gray, James Hinds Survey, 150 feet south line, 760 feet west line; total depth 2,678 feet; 200 bbls. No. 4-A M. B. Johnson, James Hinds Survey, 150 feet north line, 573 feet west line; total depth 2,687 feet; swabbing 200 bbls. No. 5-A M. Johnson, James Hinds Survey, 150 feet north and west lines; total depth 2,665 feet; initial production 300 bbls. No. 4-B Johnson, James Hinds Survey, 150 feet north and east lines; total depth 2,680 feet; average well; No. 6 T. A. Tiller, 450 feet north line, 450 feet east line; total depth 2,667 feet; initial production 500 bbls.

Nash, Windfohr & Perry's No. C-3 Davis, 300 feet east of Atlantic No. 1 Davis, 150 feet north line of Davis "C" lease; total depth 2,736 feet; 125 bbls.

San Patricio County

Spencer & Rhodes' No. 1 Texas Company fee, total depth 2,290 feet; broke all connection and ran wild; now under control and turned into line; estimated 50,000,000 feet gas.

ABANDONED TESTS

Bee County

Mission Drilling Co.'s No. 1 Ray, total depth 2,600 feet; hole lost; skidding rig and derrick to new location.

Caldwell County

Cranfill-Reynolds' No. 3 Hanson, James Hinds Survey, total depth 2,745 feet; abandoned.

Humble Oil & Refining Co.'s No. 3-A J. L. Northcut, James Hinds Survey, 150 feet north line, 450 feet west line; total depth 2,740 feet; abandoned. No. 5-A J. L. Northcut, James Hinds Survey, 226 feet north line, 1,446 feet west line; total depth 2,705 feet; has been plugged back and completed, but is considered ruined as a well.

NEW LOCATIONS

Bexar County

F. H. Eckert's No. 4 Dobrowolski, 330 feet southwest of No. 3 location.

Caldwell County

Humble Oil & Refining Co.'s No. 6 C. F. Dye, James Hinds Survey, 492 feet south line, 465 feet west line; location.

Humble Oil & Refining Co. & Luling Oil & Gas Co.'s No. 7 C. F. Dye, James Hinds Survey, 150 feet north line, 450 feet east line; rigging up. No. 8-A Floy Gray, James Hinds Survey, 150 feet south and west lines; derrick. No. 6-C Floy Gray, James Hinds Survey, 150 feet south and west lines; rigging up. No. 7-C Floy Gray, James Hinds Survey, 450 feet west line, 571 feet north line, rigging up. No. 7 T. A. Tiller, James Hinds Survey; derrick.

Duval County

Magnolia Petroleum Co.'s No. 7 Hahl, Survey 250, Block 24, 150 feet east line, 750 feet north line; location.

San Patricio County

Spencer & Rhodes' No. 2 Texas Company fee, 150 feet south and west lines of W 50 acres; location.

Guadalupe County

The Texas Company's No. 4 Lemmie Anderson; location.

Humble Field—Duval

Humble Oil & Refining Co.'s No. 22 Kohler, Survey 395, located 495 feet west line, 165 feet north line, at 1,854-78 feet, showing oil, gas and salt water; No. 23 Kohler, Survey 404, located 1,485 feet south and west lines, standing 2,417 feet; No. 30 Kohler, Section 169, location 165 feet north and west lines, set 6⅝-inch casing 1,760 feet, placed on pump; No. 31 Kohler, Survey 172, located 495 feet east line, 165 feet north line, tested salt water, standing 1,783 feet; No. 32 Kohler, Survey 399, located 495 feet east line, 165 feet south line, standing 1,700 feet. Houston Oil Co.'s No. 1 Peters, Survey 161, located 495 feet west line, 165 feet south line, location. Sun Oil Co.'s No. 2 Lopez, Survey 730, located 1,000 feet south line, 150 feet east line, rigging up.

Driscoll Field

The Texas Company's No. 1 Hyatt, Block 25, Sweeden farms tracts, 660 feet east line, 1,960 feet north line, drilling 800 feet.

Schoolfield-O'Byrne Field

Magnolia Petroleum Co.'s No. 4 Hahl, Survey 250, Block 24, 150 feet north line, 450 feet east line, at 2,338 feet, 100 bls.; No. 6 Hahl, Survey 250, Block 24, located 150 feet north line, 1,050 feet east line, location; No. 7-B Hahl, Survey 61, located 650 feet south line, 2,950 feet east line, at 3,888 feet, drilling. S. & O. Oil Co.'s No. 6 Hahl, Survey 250, Block 23, located 150 feet south line, 1,050 feet east line, at 1,900 feet, drilling. G. M. Partee's No. 5 Moody, Survey 60, located 1,848 feet northwest lines, 150 feet west line, rigging up.

Randado Field—Jim Hogg

Randado Oil Corp.'s No. 35 Palacious, Survey 291, Block 2, located 150 feet south line, 450 feet east line, at 100 feet, standing.

Henne-Wich-Fariss Field

George S. Marshall's No. 4 Holbein, Survey 11, Block 10, Share 3, 150 feet south and west lines, has derrick up; No. 5 Holbein, Share 3, Block 10, Survey 15, located 150 feet north and west lines, derrick. Magnolia Petroleum Co.'s No. 1 J. M. G. Martinez, east half of Survey 6, 150 feet north and west lines, has derrick up. W. R. Shankle's No. 1 Holbein, Las Animas grant, Share 3, 150 feet north and west lines, Hogg Ridge Subdivision, at 1,200 feet, drilling.

Alworth Field

Alworth, Stevens, Hill Co.'s No. 14 M. Garza, Survey 39, Block 8, 204 feet southeast lines, 570 feet northeast lines, at 1,016 feet, preparing to resume drilling.

Schott Field—Webb

Livingston & Payne's No. 1 Guerra-Ochoa, Survey 58, located 917 feet east line, 470 feet south line, at 1,649 feet, standing.

Mid-Ojuelos Field

Crown Central Petroleum Corp.'s No. 1 E. Garcia, Survey 463, located 900 feet east line, 150 feet south line, at 1,579 feet, tested dry, standing waiting orders.

Carolina-Texas Field

Carolina-Texas Oil Co.'s No. 8 Benavides, Survey 683, Block 12, 150 feet south line, 450 feet west line, at 100 feet, drilling. Foster Barsley's No. 6 Webster, NE SW, Survey 684, located 150 feet south and east lines, rigging up. Trapshooter Reilly Oil & Royalty Co.'s No. 2 Benavides, Survey 685, located 1,170 feet west line, 150 feet north line, at 2,100 feet, drilling.

Cole Gas Field

Southern Oil Co.'s No. 1 King-Harper, Survey 323, located 337 feet north line, 1,625 feet east line, at 2,100 feet. John J. O'Hern's No. 2 Benavides, SE NE, Survey 694, located 660 feet north and west lines, at 1,800 feet, drilling. O. W. Killam's No. 11 Bruni, Survey 3, at 1,265 feet, drilling. Magnolia Petroleum Co.'s No. 1 O'Hern-Benavides, Survey 694, Block 2, located 150 feet south and east lines, rigging up.

Magnolia-Cole Field

Cole Petroleum Co.'s No. 67 Benavides, Survey 412, Block 12, located 313 feet

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east line, 160 feet north line, at 38 feet, standing. Magnolia Petroleum Co.'s No. 1 J. G. Valdez, Survey 754, Block 15, located 150 feet south and west lines, derrick; No. 1 A. Benavides, north half Survey 660, located 660 feet south and east lines, derrick; No. 1 M. Benavides, N half NW, Section 660, located 660 feet south and east lines, at 3,100 feet, drilling; No. 1 C. Benavides, Survey 662, located 660 feet north and east lines, location.

Jennings Field—Zapata

Blair & Acklin's No. 1 Trevino, Survey 66, Block 1, located 150 feet north and west line, rigging up. H. Muckelroy, Jr.'s No. 3 Trevino, Survey 66, Block 25, located 660 feet north and east lines, rigging up. South Texas Production Co.'s No. 1 Roy Jennings, Mira Flores Grant Survey, 18,055 feet southwest lines, 11,040 feet southeast lines, at 2,565 feet, drilling; No. 5 Joe Jennings, Cerrito Blanco Grant Survey, 2,775 feet northeast lines, 1,585 feet northwest lines, at 500 feet, drilling. Killam-Duggan's No. 5 Cuellar, Cerrito Blanco Grant Survey, 2,900 feet east line, 1,350 feet south line, at 500 feet, drilling.

Mirando Valley Field

O. W. Killam's No. 1 Flores, Survey 240, located 850 feet southeast lines, 560 feet northeast lines, at 1,260 feet, drilling.

Somerset Field—Atascosa

Schimmel Production Co.'s No. 3 H. F. Gayle, C.E.P.I.&M. Survey, Block 2, located 946 feet east of No. 1, location.

Yoast Field—Bastrop

The Texas Company's No. 8 Yoast, A. Garcia Survey, derrick.

Pettus Field—Bee

Mission Drilling Co.'s No. 3 Ray Ranch, 3 miles east of No. 2, at 3,000 feet, drilling. Nichols and others' No. 2 Hicks, at 2,100 feet, shut down.

Dobrowolski Field—Bexar

Amelia Balzart's No. 3 J. P. Adams, 150 feet from road offsetting the Dobrowolski No. 1, has derrick up.

Gas Ridge Field

Medio Oil Co.'s No. 2 Hamilton Land Development Co., L. Mumos Survey, 200 feet east line, 1,375 feet north line, at 470 feet, drilling.

Joe Bruner Field—Caldwell

J. W. Allen's No. 1 A. B. Jackson 50 acres, Spencer Morris Survey, moving in rig. Tip de Arman's No. 3 G. F. Carter, James Hinds Survey, 50 feet north and west lines, location. E. R. Brawn and C. O. Miller's No. 2 R. W. Carter, Gerren Hinds Survey, 150 feet north and west lines, at 2,680 feet, being completed by Cranfill-Reynolds; cleaning out hole, showing considerable water. Forest Oil Co.'s No. 1 M. H. Woods, Isaac Weldon Survey, Block 35, south central part of lease, location; No. 1 T. Enriquez, Luling Townsite, Block 32, center of Lot 30, location. T. C. Hadley's No. 1 J. M. Hanson, James Hinds Survey, 150 feet south and east lines of west half of east 20 acres J. M. Hanson farm, topped chalk at 2,395 feet, is shut down at 2,640 feet; No. 4 Merriwether, at 2,027 feet, drilling in shale. Humble Oil & Refining Co.'s No. 1-B J. L. Northcut, topped chalk 2,225 feet, at 2,687 feet, drilling, topped Edwards at 2,680 feet; No. 6-B Clyant Smith, James Hinds Survey, 150 feet south and east lines, last reported 2,273 feet, lost hole; skidding rig 25 feet north; continues to use same number. Humble Oil & Refining Co. and Luling Oil & Gas Co.'s No. 6 C. F. Dye, 492 feet south line, 465 feet west line, at 1,890 feet, drilling; No. 3-A Floy Gray, 150 feet south line, 573 feet west line, at 2,650 feet, drilling; No. 6-A Floy Gray, 525 feet south line, 820 feet west line, at 2,597 feet in Del Rio, drilling. Magnolia Petroleum Co.'s No. 1 Mattie Merriwether, A. Floyd Survey, 450 feet northwest lines, 100 feet northeast lines, topped chalk at 2,380 feet, drilling 2,465 feet. Nash, Windfohr & Perry's No. 4-C Davis, A. Floyd Survey, 300 feet south of No. 3, 450 feet west line of lease, derrick; No. 4 Wilson, A. Floyd Survey, 200 feet west line, 350 feet north line, location. The Texas Company's No. 8 Merriwether, topped Georgetown 2,705 feet, topped Del Rio 2,651 feet, 2,786 feet standing, shot casing; No. 10 Merriwether, 150 feet west line, 300 feet south of No. 7, topped chalk 2,301 feet, base chalk 2,529 feet, top Buda 2,571 feet, at 2,581 feet in Buda, drilling.

Darst Creek Field—Guadalupe

Gulf Production Co.'s No. 1 C. Anderson, J. C. Darst Survey, 150 feet south and east lines, location; No. 1 Tadlock, J. C. Darst Survey, 150 feet northwest corner, location. Stroube & Stroube's No. 1 L. G. Dennan, A. S. Emmett Survey, center 311-foot tract northwest of Humble company's 300-acre lease, rigging up and laying water line. The Texas Company's No. 1 Dallas Wilson, J. C. Darst Survey, 750 feet west line, 150 feet north line, at 2,608 feet, shut down by agreement with other operators, waiting on pipe line connections; No. 2 Dallas Wilson, J. C. Darst Survey, 150 feet south and west lines, location; No. 1 Lemmie Anderson, J. C. Darst Survey, 750 feet east line, 150 feet south line, elevation 511 feet, topped chalk 2,228 feet. This is first offset to the discovery well and was first reported as No. 2 Lemmie Anderson. No. 2 Lemmie Anderson, 150 feet out of northeast corner, at 685 feet, shut down. This test first reported as No. 1 Lemmie Anderson; No. 3 Lemmie Anderson, 150 feet north and west lines, location corrected.

Kingsville Field—Kleberg

Humble Oil & Refining Co.'s No. 4 Flato, Block 10, Section 40, 250 feet east line, 450 feet north line, at 6,577 feet, set 4-inch lines with strainer to test sand.

Cartwright Field—Live Oak

Houston Oil Co.'s No. 2-A Brown, M. B. Kilvin Survey, 1,200 feet northeast of No. 1, at 735 feet, drilling.

Adams Field—Medina

Southern Gas Utilities Co.'s No. 22 M. M. Adams, F. Mumme Survey, Block 23, located 2,308 feet west line, 644 feet south line, at 400 feet, drilling.

Agua Dulce Field—Nueces

Agua Dulce Oil & Gas Co.'s No. 1 Otto Wolters, Section 34, Benton's pasture, at 2,047 feet, standing; R. & G. Corp.'s No. 1 Brown, George H. Paul Subdivision, C SE NW, Section 87, location.

Nursery Field—Victoria

Humble Oil & Refining Co.'s No. 3-A Jay J. Welder, D.L.&C. Survey, 1,634 feet southeast lines, 736 feet southwest lines, at 3,700 feet, drilling.

LOUISIANA-ARKANSAS

(Continued from Page 58)

last week at 5,002 feet and Norton immediately made location for a second, deeper, test for which he has derrick up 638 feet north and 1,260 feet west SE cor. NE Sec. 33-23-16, a mile and a half northeast of the Fortner. It is scheduled to go 6,000 feet.

New Carbon Plant

A new carbon plant in the Morehouse Parish division of the Monroe gas district is indicated by negotiations for a 99-year lease on 20 acres in a block of five-year commercial leases taken by Imperial Oil & Gas Products Co. centering on Section 26-22-5. The block consists of 1,000 acres around Wardville and the lease does not carry a drilling clause. The 20 acres is desired for a carbon plant site on which the rental is reported to be $1,000 per year.

A well to go 2,700 feet at which depth an old well on the same block got a show in the Blossom several years ago, was the chief consideration in a trade by Roy Nichols, of Jacksonville, Texas, for 10,000 acres centering on Section 10-10-8, Natchitoches Parish, in the NE cor. NE of which he has made location for his test. If it looks good at this depth the hole will probably go on down to 3,000 or 3,500 feet.

R. L. Gay and others who have been active in the Zwolle district of Sabine Parish for several years with large hopes and small reward, and others who have been interested spectators, are much intrigued by the consistently improving showings of the two wells Gay has completed. No. 2 Bowman-Hicks, Section 14-7-14, was completed last December making 50 bbls. initial through 2½-inch tubing from 12 feet of broken sand, total depth 2,130 feet. It has shown a little larger production from week to week until this week, after cleaning out, it started off doing more than double its original production, gauging 110 bbls. No. 3, on same lease and section, starting off with 10 bbls., made 30 bbls. on last gauge.

Mount Holly District

Much the same improvement is noted in Houston Oil Co.'s No. 3-B Wilson, (formerly McDonald Brothers), in Section 25-15-18, Mount Holly district of Ouachita County, Arkansas. Completed July 11 making 1,500 bbls. initial, 24 per cent b.s. and water from 9 feet of sand, total depth 2,785 feet, it went dead a week ago but on cleaning out shortly after the Houston bought the "40" and the three wells on it, it came back with an estimated 2,500 bbls. of oil, 8 per cent b.s. and water; No. 1-B Wilson also improved after treatment, increasing from 150 bbls. daily to 200 bbls. McDonald Brothers' No. 1-C Wilson is pumping and flowing 200 bbls. of oil and 50 bbls. of water. Root Refineries' No. 1 Wilson, in the same section, completed in May pumping 40 bbls., 8 per cent water, has improved in that the cut has decreased to 2 per cent water and b.s. with no diminution in production. McDonald Brothers have bought the SE NE Section 33-15-18, 2½ miles southwest of production, for $50 cash and $50 oil.

In Union County Joe Modisette has taken 1,500 acres scattered around Section 25-19-12, south of Strong, and has location in the SW cor. SE of that section for a well to go 3,500 feet. He is offering forties and eighties and also dickering for dry hole money with five of the major companies to finance the test. Sam Arrendale's No. 1 Gallagher & Nelson, Section 18-18-17, southwest of Lisbon production, tested 500,000 feet of gas in the Nacatoch at 2,109-31 feet and is coring at 2,172 feet. W. M. Redditt and others of Shreveport made location in the center of SE SE Section 36-16-6, Ashley County, for a test on their 6,000-acre block. It is a mile and a half southeast of Mist and a mile north of an old well drilled by Pine Prairie Oil & Gas Co. in which they claimed a show of oil in the Nacatoch. Redditt's well is scheduled for 3,500 feet.

MISSISSIPPI

Reports from Mississippi (R. L. Steffy's Service) are that Philps Brothers cored a soft brown sandy shale showing oil from 2,905-11 feet in No. 1 James, Section 20-11-5, Yalobusha County, and were taking another core when the report was turned in. Lauderdale Oil & Gas Co.'s No. 1 Lackey, Section 2-7-16, Lauderdale County, is in chalk at 1,755 feet and Meridian Natural Gas Co.'s No. 1 Hauser, Section 33-8-18, has resumed drilling after operations were halted when the crown block was pulled in while coming out of the hole with 1,860 feet of drill pipe, and is in green sand (Eutaw) at 1,875 feet. Ohio Oil Co. has taken 600 acres of the Lauderdale block and E. M. Jones, of El Dorado, is figuring with Love Brothers on a deal involving part, or all, of their 60,000-acre block southeast of Jackson in Hinds County on which they are obligated to drill two wells. Prairie Oil & Gas Co. has leased T. B. Slick's 3,400-acre ranch at Aberdeen, Monroe County. E. W. Marland has a 17,000-acre block in fee near Macon in Noxubee County. As he has owned it for some time there is nothing to indicate he plans any immediate development. Arkansas Natural Gas Corp. is drilling hard sandy shale at 3,668 feet on No. 1 Rye, Section 22-15-17 Monroe County.

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA

BOSSIER PARISH—CARTERVILLE

Company, farm and location—	Remarks:
Delaware-Louisiana Development Co.'s No. 4 Bollinger, Sec. 38-23-11	Swbd. little mud and oil 3,150 ft; W.O.S.R.; T.D. 3,922 ft.

BOSSIER—BELLEVUE

H. L. Morgan et als' No. 1 Wetherbee, 200 ft. S, 200 ft. W, NE cor. SW SE, Sec. 21-19-11	Cmtd. 10-in. 380 ft; drlg. 450 ft.

BOSSIER—ELM GROVE

J. F. Palmer's No. 4 McCann, Sec. 31-16-11	S.D. 1,910 ft.
Palmer Corp.'s No. 1 Roos, 660 ft. N, 660 ft. W, SE cor. NW, Sec. 23-17-12	Rigging up.

CADDO PARISH—MOORINGSPORT

Falcon Oil Cc.'s No. 1 Nunley, 3,212 ft. N and 5,591 ft. E SW cor. Sec. 29-20-15	Waiting on 6-in. to set at 1,997 ft.
C. B. Moore's No. 1 Buckalew, 2,000 ft. N, 1,000 ft. W, SE cor., Sec. 30-20-15	Location.

CADDO PARISH—DIXIE

Gold and Sklar's No. 2 Hunter, 330 ft. S and W, NE cor. SW NE, Sec. 17-19-14	Tested dry 2,421 ft; coring 2,428 ft.
Gold & Sklar's No. 3 Hunter, 330 ft. N, 300 ft. E, SW cor. SW NE, Sec. 17-19-14	Derrick.
Gold & Sklar's No. 4 Hunter, 330 ft. N, 300 ft. W, SE cor. SW NE, Sec. 17-19-14	Location.
Gulf Ref. Co.'s No. 5 Oden, 990 ft. S, 990 ft. E, NW cor. NE, Sec. 18-19-14	Bailed dry 2,405 ft; made 15 bbls. oil and wtr. in 6 hrs; pulled liner; coring 2,407 ft.
Gulf Ref. Co.'s No. 2 Hunter, 330 ft. W, 250 ft. S, C, Sec. 17-19-14	Cmtd. 6-in. 2,335 ft; T.D. 2,405 ft.
Ohio Oil Co.'s No. 3 Hunter, 330 ft. N and E, SW cor. NW NE, Sec. 17-19-14	Oil show 2,415 ft; bailed dry; drilling deeper.
Ohio Oil Co.'s No. 4 Hunter, 330 ft. N and W, SE cor. NW NE, Sec. 17-19-14	Derrick.
Ohio Oil Co.'s No. 5 Hunter, SE cor. NE NW, Sec. 17-19-14	Spudded Aug. 1; cmtd. 10-in. 100 ft; drlg. 1,000 ft.
Palmer Corp.'s No. 2 Hunter, 990 ft. E, 330 ft. N, SW cor. Sec. 8-19-14	W.O.S.R. 9 ft. broken sand; T.D. 2,411 ft.
Standard Oil Co.'s No. 3 Henderson, 220 ft. N, 330 ft. W, SE cor. SW SE, Sec. 7-19-14	Derrick.
Standard Oil Co.'s No. 3 Oden, 330 ft. S, 330 ft. W, NE cor. SW NE	Spudded Aug. 1; cmtd. 10-in. 96 ft; drlg. 1,473 ft.

CADDO PARISH—OIL CITY

W. D. Chew's No. 5 fee, Sec. 33-21-16	Cmtng. bottom; T.D. 2,306 ft.
W. D. Chew's No. 1-C Levee Board, 2,490 ft. W, 1,470 ft. S, NE cor., Sec. 34-21-16	W.O.S.R. 1,826 ft.
W. D. Chew's No. 2-C Levee Board, 2,490 ft. W, 1,473 ft. S, NE cor., Sec. 34-21-16	Spudded Aug. 1; cmtd. 8-in. at 896 ft.
Gulf Ref. Co.'s No. 18-A Levee Board, 100 ft. S, 180 ft. E, NW cor. NE, Sec. 34-21-16	Spudded Aug. 1; cmtd. 10-in. 45 ft; 6⅝-in. 1,800 ft; 23 ft. broken sand; T.D. 1,823 ft.
Magnolia Petroleum Co.'s No. 18 Doan-Thigpen, SE cor. SW SE Sec. 6-20-15	Fishing for drill stem 1,700 ft; T. D. 3,678 ft.
Magnolia Pet. Co.'s No. 4 Levee Board, 330 ft. S, 330 ft. E, NW cor. NE NE, Section 7-20-15	Rig up.
C. B. Moore's No. 5 Dillon, SW cor., Sec. 22-20-15	Plugged back to 2,188 ft; T.D. 2,202 ft.
Oil City Oil Co.'s No. 6 Curtis, 985 ft. W. 2,508 ft. S, NE cor. NW, Sec. 10-20-16	Spudded July 21; cmtd. 10-in. 40 ft; cored sand showing oil and S.W. 1,840-46 ft.
Shreveport Oil Corp.'s No. 1 Guy, NW NE Sec. 32-21-15	Tested S.W. with show of oil; S.D. for orders; T.D. 2,300 ft.

Simplex Oil Co.'s No. 7 Youree-Randolph, 660 ft. N and 660 ft. W C Sec. 13-20-15 ..... Tested 50,000 ft. gas at 2,300 ft. S.D. for orders; T.D. 2,326 ft.

The Texas Co.'s No. 70 Levee Board, 700 ft. E. 275 ft. N, SW cor. SE, Sec. 27-21-16 ..... Spudded Aug. 2; cmtd. 10-in. 44 ft; drlg. rock 1,491 ft.

The Texas Co.'s No. 71 Levee Board, 1,150 ft. E, 700 ft. N, SE cor. SE, Sec. 27-21-16 ..... Location.

L. A. Warren's No. 1 Ivins, 200 ft. S, 200 ft. W, C, Sec. 33-22-15 ..... Cmtd. 6-in. 1,480 ft.

CADDO PARISH—HOSSTON

Standish O. & R. Co.'s No. 12 Allen, 1,120 ft. W, 330 ft. S, C, Sec. 23-22-15 ..... Rigging up.

CADDO PARISH—LEWIS

Snake Creek Oil Co.'s No. 1 Levee Board, SW NW Sec. 9-21-16 ..... Tested dry with show of oil and S.W; S.D.; T.D. 2,328 ft.

CADDO PARISH—PINE ISLAND

Dixie Oil Co.'s No. 92 Dillon, SW NW Sec. 13-21-15 ... Cored quartzite 6,423 ft.

Dixie Oil Co.'s No. 100 Dillon, 1,800 ft. S, 415 ft. E, NW cor., Sec. 13-21-10 ..... W.O.S.R. 1,724 ft.

Dixie Oil Co.'s No. 101 Dillon, 1,535 ft. S, 895 ft. E, NW cor., Sec. 13-21-15 ..... Spudded July 28; cmtd. 10-in. 38 ft; 6-in. 1,474 ft.

Magnolia Petroleum Co.'s No. 18 Dillon, NW cor. Sec. 24-21-15 ..... T.A. 4,866 ft.

CLAIBORNE PARISH—HOMER

Oakes and others' No. 1 Richardson, NE SE Sec. 19-21-7 ..... S.D. 1,112 ft; in litigation.

CLAIBORNE PARISH—HAYNESVILLE

Smitherman & McDonald and others' No. 1 Miller, 825 ft. S and 660 ft. E C Sec. 17-23-8 ..... S.D. for orders; T.D. 4,780 ft.

LASALLE PARISH—URANIA

Air Lift Oil Co.'s No. 2 Mo.-Pac. R. R., 610 ft. W, 320 ft. N, SE cor. NW, Sec. 26-10-1e; formerly listed as Gardner et als' No. 1 Mo.-P.R.R. ..... Tested dry 1,532 ft; retesting.

Air Lift Oil Co.'s No. 3 Mo.-Pac. R. R., Section 26-10-1e. Derrick.

Kinney, Hardtner & Randall's No. 1 Kinney, SW SW Sec. 7-10-2e ..... S.D. 1,320 ft.

Philp and others' No. 1 Urania, SE cor. NE NE Sec. 1-10-1e ..... S.D. waiting orders; T.D. 630 ft

Randall and others' No. 3 Urania, Sec. 1-10-1e ..... S.D. 675 ft.

G. W. Zoder's No. 3 King, 150 ft. N, 660 ft. W, SE cor. NE, Sec. 13-10-1e ..... Cmtd. 6-in. 1,200 ft.

MOREHOUSE PARISH

Grecian Bend Gas Co.'s No. 1 Seacrease, 2,025 ft. S, 203 ft. W, NE cor. SE, Sec. 14-20-4 ..... Drlg. gumbo 1,265 ft.

J. S. Herkness' No. 8 Bowles, 660 ft S, 660 ft. E, NW cor. NE, Sec. 18-20-5 ..... Spudded Aug. 2; cmtd. 12-in. at 179 ft.

S. D. Hunter's No. 9 Allison, 660 ft. S, 660 ft. E, NW cor. Sec. 18-20-5 ..... Cmtd. 6-in. 2,167 ft.

S. D. Hunter's No. 10 Allison, 1,962 ft. E, 660 ft. S, NW cor., Sec. 18-20-5 ..... Location.

Magnolia Pet. Co.'s No. 5 U. S., 620 ft. N, 330 ft. W, SE cor. NE SW, Section 29-21-5 ..... Cmtd. 10¾-in. 900 ft.

Southern Carbon Co.'s No. 11 Tensas, SE SE Sec. 31-21-4 ..... Drlg. shale and boulders 1,818 ft.

United Carbon Co.'s No. 2 Patton, 660 ft. N, 660 ft. E, SW cor. SE, Sec. 2-20-4 ..... Location.

United Carbon Co.'s No. 3 Patton, 660 ft. W, 660 ft. S, NE cor. SE, Sec. 2-20-4 ..... Location.

OUACHITA PARISH

Ark.-La. P. L. Co.'s No. 2 McEnery, 221 ft. N, 660 ft. E, SW cor. NW, Sec. 21-19-4 ..... Spudded Aug. 2; cmtd. 12½-in. at 226 ft.

Austin & Jordan's No. 1 H. M. McGuire, SW SW Sec. 11-18-3 ..... Cmtd. 6-in. 2,226 ft.

Bahan & Bahan's No. 1 Frierson, 300 ft. S, 300 ft. E, NW cor. NE, Sec. 18-19-4 ..... Cmtd. 6-in. 2,120 ft.

J. B. Bond's No. 1 McEnery, 138 ft. N, 792 ft. E, SW cor. SE, Sec. 19-19-4 ..... Arranging to test; T.D. 2,191 ft.

B. J. Dickinson's No. 1 Stubbs, 379 ft. S, 76 ft. W, NE cor. NW, Sec. 27-19-4 ..... Cmtd. 6-in. 2,150 ft.

J. S. Herkness' No. 7 Bowles, 1,806 ft. E, 3,165 ft. S, NW cor. NE, Sec. 20-20-5 ..... Cmtd. 6-in. 2,261 ft.

Imperial O. & G. Co.'s No. 8 Stubbs, 1,792 ft. S, 550 ft. W, NE cor. NW, Sec. 18-19-4 ..... Cmtd. 6-in. 2,115 ft.

Imperial O. & G. Co.'s No. 9 Stubbs, 150 ft. S, 150 ft. E, NW cor., Sec. 18-19-4 ..... Location.

G. E. Jordan's No. 1 Anding, NW NE Sec. 18-18-5 .... Plugged back to 2,234 ft; T.D 2,480 ft.

Jordan Drlg. Co.'s No. 4 J. Cole, 2,337 ft. N, 3,201 ft. W, SE cor., Sec. 1-18-3 ..... Drlg. gumbo 1,600 ft.

La Del Prod. Co.'s No. 49 fee, 1,320 ft. N, 924 ft. W, SE cor. SW, Sec. 30-20-5 ..... Drlg. 1,700 ft.

Mack & Pipes' No. 1 Schultz, 610 ft. E. 60 ft. S southerly cor., Sec. 18-18-4, in Sec. 13-18-4 ..... Spudded Aug. 1; cmtd. 10-in. 202 ft; 6-in. 2,174 ft.

Mack & Pipes' No. 2 Schultz, 2,777 ft. N, 300 ft. W, SE cor. SW, Sec. 13-18-4 ..... Location.

Mack & Pipes' No. 1 Slagle & Johnson, 1,294 ft. N, 309 ft. W, NW cor., Sec. 47, in Sec. 48-18-4 ..... Derrick.

Mack & Pipes' No. 1 S. Wallace, 2,010 ft. S, 269 ft. E, NW cor., Sec. ..... Bailing to test; T.D. 2,175 ft.

Magnolia Pet. Co.'s No. 2 fee 401, 660 ft. S, 660 ft. E, NW cor., Sec. 2-18-3 ..... Location.

Magnolia Pet. Co.'s No. 2 fee 404, 660 ft. N, 660 ft. W, SE cor., Sec. 15-19-5 ..... Drlg. 2,100 ft.

Magnolia Pet. Co.'s No. 3 fee 404, 660 ft. N, 660 ft. E, SW cor., Sec. 11-19-5 ..... Location.

J. Potts, trustee's No. 3 Potts, 425 ft. N, 345 ft. E, NW cor., Sec. 47, in Sec. 7-18-4 ..... Spudded July 30; cmtd. 12-in. 202 ft; 8-in. 858 ft.

Southern Carbon Co.'s No. 54 fee, 660 ft. N, 674 ft. W, SE cor. NE, Sec. 13-19-4 ..... Drlg. gumbo 1,365 ft.

United Oil & Natural Gas Products Co. of Louisiana's No. 2 Cole, 660 ft. S, 594 ft. E, C, Sec. 26-20-4 ..... Derrick.

United Oil & Natural Gas Products Co. of Louisiana's No. 5 Guthrie, 6,896 ft. N, 6,022 ft. W, cor. Secs. 49, 26, and 25, Sec. 49-20-5 ..... Derrick.

H. L. Wood's No. 1 Miller, Sec. 18-18-5 ..... Drlg. in 2,220 ft.

RED RIVER PARISH

J. H. Askew's No. 1 Lockett, NW SW Sec. 23-13-10 .. Bailing to test; T.D. 2,695 ft.

Joe Danciger et als' No. 1 Pickett, 6,621 ft. S, 2,623 ft. W, NE cor., Sec. 15-13-11, in Sec. 23-13-11 ..... Workover; arranging to shoot csg. at 900 ft. to test Nacatoch sand; completed in 1915 as Union Gas & Pet. Co.'s No. 1 Pickett.

Root Refineries, Inc.'s No. 1 Home State & Savings Bank, 330 ft. N, 330 ft. W, C, Sec. 8-13-10 ..... Oil show 2,570 ft; drill stem test; S.W; cored sand showing gas 2,598 ft.

RICHLAND PARISH

W. C. Feazel's No. 1 Haynes & Moore, 275 ft. S, 1,439 ft. E, NW cor. NE, Sec. 17-16-6 ..... Spudded Aug. 5; drlg. 100 ft.

W. C. Feazel's No. 2 McCoy, 330 ft. E, 660 ft. N, SW cor., Sec. 33-16-6 ..... Spudded Aug. 3; cmtd. 12-in. at 206 ft.

Feazel, Bendel & Brown's No. 1 J. H. Hunter, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 23-16-6 ..... Location.

Hope Prod. Co.'s No. 1 Boykin, 660 ft. N, 660 ft. E, SW cor. NW, Sec. 21-17-6 ..... Location.

Hope Producing Co.'s No. 1 Eubanks, NW SE Sec. 26-17-6 ..... Drlg. lime 2,640 ft.

S. R. Humble's No. 1 Binion & Sartor, 660 ft. S, 660 ft. E, NW cor. SW, Sec. 22-17-6 ..... Cmtd. 6-in. 2,274 ft.

Magnolia Pet. Co.'s No. 2 Hatch, 180 ft. N, 660 ft. W, SE cor. NE SE, Sec. 2-15-5 ..... Location.

Magnolia Pet. Co.'s No. 3 C. M. Noble, 370 ft. S, 105 ft. W, NE cor. SE NE, Sec. 35-16-5 ..... Tested S.W; W.O. 2,464 ft.

Magnolia Pet. Co.'s No. 4 C. M. Noble, 400 ft. S, 660 ft. W, NE cor. SE NE, Sec. 35-16-5 ..... Location.

Magnolia Pet. Co.'s No. 1 B. F. Sartor, 1,087 ft. W, 787 ft. N, C, Sec. 17-16-6 ..... Derrick.

M. L. Meredith's No. 1 Holdness, 1,980 ft. S, 990 ft. W, NE cor., Sec. 15-16-6 ..... Derrick.

Northern La. Nat. Gas Co.'s No. 4 Boykin, Sec. 20-17-14 .. Relief well to cratered Nos. 1 and 3 Boykin; spudded July 2[illegible] cmtd. 15½-in. 178 ft.

Palmer Corp.'s No. 1 Eubanks, 1,100 ft. N, 350 ft. E, SW cor. SE NW, Sec. 26-17-6 ..... Derrick.

Palmer Corp.'s No. 1 La. Pet. Co., Sec. 22-17-6 ..... Old well drilling deeper; completed Sept. 3, 1927, as La. Pet. Co.'s No. 1 Binion & Sartor, 5,000,000 ft. gas; T.D. 2,476 ft; C.O. to 2,405 ft.

Southern Carbon Co.'s No. 1 Binion & Sartor, 660 ft. N, 1,320 ft. E, SW cor. SE, Sec. 21-17-6 ..... Fish. for drill stem; T.D. 2,252 ft.

SABINE PARISH—PLEASANT HILL

Bridges-Clark Oil Co.'s No. 1 Williams, 1,520 ft. E, 1,780 ft. N, SW cor., Sec. 33-12-10 ..... Cmtd. 6⅝-in. 3,146 ft.

UNION PARISH

Bahan & Bahan's No. 1 Peake, 1,007 ft. S, 126 ft. W, NE cor., Sec. 17-20-4 ..... Arranging to test; T.D. 2,140 ft.

Bahan & Bahan's No. 2 Peake, 1,425 ft. S, 100 ft. W, NE cor., Sec. 17-20-4 ..... Location.

Bahan & Bahan's No. 1 School fee, formerly No. 1 Barr, NW NW Sec. 16-20-3 ..... Cmtd. 6-in. 2,065 ft.

Harrell & Jones' No. 1 Stripling, NE NE Sec. 17-20-4 .. S.D. 2,150 ft.

Natural Gas Producing Co.'s No. 8 Hale, 1,880 ft. S, 660 ft. W, NE cor., Sec. 11-21-2 ..... Cmtd. 6-in. 2,109 ft.

WEBSTER PARISH—COTTON VALLEY

La. Oil Ref. Corp.'s No. 9 Gray, 1,980 ft. S, 660 ft. W, NE cor. NW, Sec. 29-21-10 ..... Spudded Aug. 5; drlg. 200 ft.

Magnolia Petroleum Co.'s No. 1 McCook & Hibbler, C SW SW Sec. 22-21-10 ..... Coring red sandy shale 6,656 ft.

Magnolia Petroleum Co.'s No. 5-A Robbins, SE SW Sec. 21-21-10 ..... Drlg. lime and shale 4,234 ft.

Ohio Oil Co.'s No. 44 Bodcaw, NW NW Sec. 28-21-10 .... Drlg. 6⅝-in. plug; T.D. 4,264 ft.

Standard Oil Co.'s No. 22-B Bodcaw, Sec. 28-21-10 ..... Drlg. 4,544 ft.

WEBSTER PARISH—SAREPTA AND SHONGALOO

J. W. Clark, trustee's, No. 1 W. B. Roseberry, W half SE SW Sec. 33-23-9 ..... Standing 1,400 ft. fluid; little S. W.; 5 ft. sand; W.O.S.R.; T.D. 2,767 ft.

Pat Hudson's No. 1 Slack, SE NE Sec. 1-22-9 ..... Cmtd. 6-in. 2,745 ft.

F. E. Estes' No. 2 Pardee, 1,270 ft. W, 50 ft. S, NE cor. NW, Sec. 3-22-11 ..... Location.

W. M. Kemp et als' No. 1 R. D. Campbell, 250 ft. S, 250 ft. W, NE cor. NW NE, Sec. 11-22-10 ..... Milled out 4 liners; set 4½-in. with packer; packer did not hold; drlg. 2,653 ft.

Magnolia Petroleum Co.'s No. 1 Sally Coyle, SE NE Sec. 2-22-11 ..... Standing 1,500 ft. in fluid; W.O. S.R.; T.D. 2,695 ft.

Magnolia Pet. Co.'s No. 1 N. T. Knight, 330 ft. S, 330 ft. E, NW cor. SE SE, Sec. 33-23-9 ..... Derrick.

Magnolia Pet. Co.'s No. 1 Roseberry, 330 ft. N, 330 ft. W, SE cor. NW SE, Sec. 19-23-9 ..... Cmtd. 6⅝-in. 2,755 ft; T.D. 2,76[illegible] ft.

Magnolia Pet. Co.'s No. 2 Roseberry, 330 ft. N, 330 ft. W, SE cor. NW SE, Sec. 19-23-9 ..... Location.

Woodmansee et als' No. 1 Boyd, 200 ft. S, 200 ft. E, NW cor. SE SW, Sec. 3-22-11 ..... Derrick.

WINN PARISH—URANIA

Gardner, Hunter & Brown's No. 14 Harper, 500 ft. N, 500 ft. E, SW cor. SE SW, Sec. 23-10-1e ..... Spudded Aug. 1; cmtd. 10-in. 16[illegible] ft; 6-in. 1,495 ft; T.D. 1,505 ft.

ARKANSAS

NEVADA COUNTY

C. F. Steele's No. 1 E. W. Groves, Sec. 21-14-20 ..... Cored sandy shale 2,557 ft.

Wright Oil Co.'s No. 4 Groves, Sec. 12-14-21 ..... Waiting on standard rig; T.D. 1,140 ft.

MOUNT HOLLY

McDonald Bros.' No. 2-A Wilson, 330 ft. S, 330 ft. E, NW cor. NE SW, Sec. 25-15-18 ..... Drill stem test 2,738-61 ft; 9 jnts. S.W. and oil; reaming; S.D. 2,761 ft.

Houston Oil Co.'s, was McDonald Bros.' No. 4 B-Wilson, 150 ft. N, 150 ft. E, SW cor. SW NW, Sec. 25-15-18.. Derrick.

OUACHITA COUNTY—SMACKOVER

L. H. Hamilton's No. 1 Arnold & Doyle, SE SE Sec. 23-15-16 ..... Swbng. to test 23 ft. of broken sand; T.D. 2,010 ft.

Magna Producing Co.'s No. 10-B Linahan, NE cor. SE NW, Sec. 36-15-16 ..... W.O.S.R.; 100 ft. fluid from 2¾-ft. sand; T.D. 2,012 ft.

Magna Producing Co.'s No. 11-B Linahan, 25 ft. NE of No. 10-B, in SW cor. SE NW, Sec. 36-15-16 ..... Rig up.

Marine Oil Co.'s No. 1-A Snyder, 105 ft. S, 105 ft. E, NW cor. NW SW, Sec. 34-15-15 ..... W.O.S.R; 300 ft. oil; 29 ft. broken sand; T.D. 1,964 ft.

Phillips Pet. Co.'s No. 1 Scott, SE cor. SW NE, Sec. 34-15-15 ..... W.O.S.R; 250 ft. oil; 22 ft. broken sand; T.D. 1,979 ft.

Skelly Oil Co.'s No. 1 Wood, 300 ft. N, 300 ft. E, SW cor. SE NE, Sec. 34-15-15 ..... W.O.S.R; 300 ft. oil; 16 ft. broken sand; T.D. 1,983 ft.

Standard Oil Co.'s No. 1 Geo. Powell, 160 ft. N, 160 ft. W, C, Sec. 34-15-15 ..... Cmtd. 6-in. 1,939 ft.

UNION COUNTY—CHAMPAGNOLLE

O. W. Estes' No. 1 Hargett, 200 ft. N, 200 ft. E, SW cor. SW Sec. 13-17-14 ..... Location.

Gann and others' No. 1 Doss, Sec. 10-17-15 ..... Cm.d. 6⅝-in. 2,772 ft; 5 3-16-in. 3,160 ft; T.D. 3,232 ft.

Gann and others' No. 1 Schmidt, NW NW Sec. 15-17-14. Derrick.

Magnolia Pet. Co.'s No. 1 Gregory, NE cor. SW SW, Sec. 15-17-14 ..... Coring 2,810 ft.

Oilwell Corp.'s No. 2-E Perdue, NW NW, Sec. 9-17-15 .... S.D. 3,265 ft.

Pure Oil Co.'s No. 10 E. F. Gregory, 359 ft. W, 123 ft. S, NE cor. SE SE, Sec. 10-17-14 ..... Drlg. 2,440 ft.

Rovenger Oil Corp.'s No. 3-B Perdue, 330 ft. S, 330 ft. W, NE cor. SE NE, Sec. 9-17-15 ..... Skidded 84 ft. west; drlg. 100 ft. on second hole.

UNION COUNTY—EL DORADO

J. P. Hawkins' No. 1 Goodwin, Sec. 8-17-15 ..... Tested 5,000,000 ft. gas, 8 ft. sand, cmtd. 6⅝-in; T.D. 2,193 ft.

Joe Modisette's No. 1 U. S. M. Co., 1,120 ft. E. 200 ft. N, SW cor., Sec. 1-18-14 ..... Rigging up.

Rice et als' No. 1 W. Raltey, 150 ft. S, 150 ft. E, NW cor. SW, Sec. 7-17-15 ..... Spudded July 18; cmtd. 10-in. at 92 ft.

Weisinger and others' No. 7 Goodwin, Sec. 21-17-15 .... Running sand pump; T.D. 2,185 ft.

UNION COUNTY—SMACKOVER

E. L. Chapman's No. 1 Bradley, 510 ft. W, 150 ft. N, SE. cor. SW NW, Sec. 2-16-16 ..... Spudded July 30; cmtd. 10-in. 4[illegible] ft; 6-in. 1,920 ft; T.D. 1,930 ft.

E. L. Chapman's No. 1 Purifoy, 585 ft. W, 150 ft. S, NE cor. NW SW, Sec. 2-16-16 ..... 400 ft. fluid in hole; waiting on standard rig; T.D. 2,150 ft.

Lovett et als' No. 1 Goodwin & Stone, Sec. 3-16-16 ..... S.D. 2,950 ft.

A. H. Ramage's No. 1-A James, Sec. 6-16-15 ..... Installing vacuum system; T.D. 1,984 ft.

EAST TEXAS

MARION COUNTY

Pettit Oil Co.'s No. 3 Rives, N. G. Noll Sur. ..... W.O.S.R. 2,306 ft.

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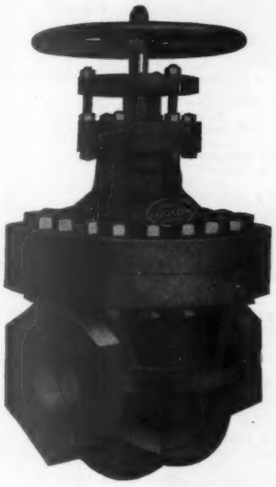

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HARRISON COUNTY

Mason et als' No. 1 Dean, J. W. Crofts Sur. ....S.D. for orders; T.D. 2,165 ft.

PANOLA COUNTY

Magnolia Pet. Co.'s No. 4 T. C. Adams, E. Jones Sur. ..Coring 2,298 ft.
Magnolia Pet. Co.'s No. 3 Ella Barker, B. C. Jordan Sur..Coring shale 2,736 ft.
Magnolia Pet. Co.'s No. 16 Carrie G. Steele, B. C. Jordan Sur. ....Fishing for drill stem 2,466 ft.
Magnolia Pet. Co.'s No. 1 Leigh-Trosper, B. Stephenson Sur. ....Old well drilling deeper; rig up; T.D. 2,618 ft.
Paul C. Warren's No. 1 F. M. McNeese, A. Booker Sur. ..Derrick.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 58)

Lide & Ford's No. 1 Nabors, SW cor. SE SW Sec. 32-12-11 ....Plugged back to 1,100 ft; reset 6-in. and packer; bailing to test 925 ft; T.D. 1,250 ft.
Longstreet Syndicate's No. 1 Ramsey, NE cor. SW NE Sec. 33-13-16 ....Changing to heavy rig and arranging to sidetrack; T.D. 2,802 ft.
Fair et als' No. 1 Hamilton, 500 ft. N, 300 ft. W, SE cor. SE SE, Sec. 1-12-13 ....Drlg. chalk 2,550 ft.
Magnolia Petroleum Co.'s No. 1 Anna Mason, 990 ft. S and 330 ft. E NW cor. SW Sec. 27-12-11 ....Location.
Magnolia Petroleum Co.'s No. 2 W. H. Mason, 330 ft. N and W C, Sec. 28-12-11....Coring blue shale 2,740 ft.
R. O. Roy's No. 1 Rogers, Sec. 13-13-14 ....Drlg. 2,310 ft.

FRANKLIN PARISH

Davis and others' No. 1 Moore, 600 ft. W and 200 ft. S NE cor. Sec. 12-11-6 ....Shut down 1,430 ft.

JACKSON PARISH

George O. Baird's No. 1 Tremont, SE cor. NW SE Sec. 24-16-1w ....Coring hard sandy lime 3,397 ft.

LASALLE PARISH

Tunica Pet. Co.'s No. 48 L. & A., 100 ft. N, 100 ft. E. SW cor. NW, Sec. 16-7-2e ....W.O.S.R. 808 ft.
Tunica Pet. Co.'s No. 49 L. & A., 600 ft. S, 300 ft. W, NE cor., Sec. 17-7-2e ....Spudded Aug. 1; cmtd. 10-in. 40 ft; drlg. 535 ft.

LINCOLN PARISH

V. E. Shaw et als' No. 1 Voss, SE cor., Sec. 1-20-3....T.D. 2,774 ft; S.D.

MOREHOUSE PARISH

J. P. White's No. 1 Chess-Wymond, Sec. 32-19-6 ....Arranging drill stem test 2,688 ft.
Rainbow Oil Co.'s No. 1 Louisville Cooperage Co., 990 ft. S and E NW cor. NE Sec. 33-22-3 ....Derrick.

NATCHITOCHES PARISH

S. D. McDaniel's No. 2 Clark & Morse, 800 ft. E and 350 ft. N C Sec. 23-5-6 ....Tested 1,000,000 ft. gas and salt water 8 ft.; shut down for orders, total depth 2,536 ft.
Robeline Oil & Gas Co.'s No. 1, NE SW Sec. 7-8-9 ....Drill stem stuck waiting orders; claim show of gas, total depth 3,230 ft.

OUACHITA PARISH

Haynes Oil Co.'s No. 1 Dixie Land Co., 957 ft. N, 3,960 ft. W, SE cor., Sec. 17, in H. R. 54-17-3, Sec. 17-17-3..Location.
Ouachita Natural Gas Co.'s No. 2-B D'Arbonne, SE cor. Sec. 25-19-2e ....Laying fuel line; arranging to deepen; T.D. 3,349 ft.
Farish & Russell's No. 1 School fee, NE Sec. 16-16-4 ..Did not test sand at 4,207-09 ft; drlg. gumbo 4,265 ft.

RED RIVER PARISH

Benedum & Trees Oil Co.'s No. 1 FranklinRealty Co., 350 ft. E, 350 ft. S, NW cor., Sec. 29-11-9 ....Drlg. shale 2,004 ft.
Eylers Oil Co.'s No. 1 Chaffraix, NE cor. NE SW Sec. 30-12-10 ....Arranging to test 2,626 ft.
D. H. Riddick's No. 1 Johnson, 500 ft. N, 500 ft. W, SE cor., Sec. 17-12-10 ....Location.

RICHLAND PARISH

Austin & McDonald's No. 1 Millsaps, 660 ft. N and 1,980 ft. E SW cor. NW Sec. 17-17-6 ....Tested 200,000 ft. gas; waiting orders; T.D. 2,510 ft.
Austin & McDonald's No. 2 Millsaps, SW cor. Sec. 17-17-6 ....Waiting orders; T.D. 2,697 ft.
Austin & McDonald's No. 3 Millsaps, 1,980 ft. S and 660 ft. E NW cor. Sec. 16-17-6 ....Rig up.
Austin & McDonald's No. 4 Millsaps, NW cor. Sec. 16-17-6 ....Location.
Palmer Corp.'s No. 2 Miles, 723 ft. E, 660 ft. S, NW cor. NE, Sec. 12-17-6 ....Spudded July 31; cmtd. 12½-in. 178 ft; 9-in. 875 ft.
United Carbon Co.'s No. 1 Thornby, 660 ft. W, 650 ft. N, SE cor. NW NE, Sec. 12-16-6 ....Location.

SABINE PARISH

R. L. Gay, trustee's No. 4 Bowman-Hicks, SE cor. NW SE, Sec. 14-7-14 ....Cmtd. 12½-in. 68 ft; S.D. 250 ft.
R. L. Gay, trustee's No. 1 Long-Bell Lbr. Co., NE cor. NW NW Sec. 26-8-14 ....Drlg. 2,460 ft.
R. L. Gay, trustee's No. 2 Sabine Lumber Co., Sec. 23-7-14 ....Drlg. 2,610 ft.
A. H. Tarver's No. 1 Long-Bell Lumber Co., NW cor. SW NW Sec. 29-8-13 ....Small show gas and mud; waiting orders; T.D. 3,535 ft.

UNION PARISH

J. E. Cammattee and others' No. 2 Tugwell, NE cor. NE NW Sec. 21-22-1e ....S.D. 2,250 ft.
H. C. McDonald's No. 2 U. S., NW cor. SW NE Sec. 18-23-1e ....Shut down 1,500 ft.

WEBSTER PARISH

F. M. Fuller's No. 1 Monzingo, 200 ft. N, 200 ft. W, SE cor., Sec. 27-18-8 ....Derrick.

WEST CARROLL PARISH

W. F. Hyde, trustee's No. 1 Chickasaw Imp. Co., NE cor. NE, Sec. 24-23-11 ....Rigging up.

ARKANSAS

ASHLEY COUNTY

J. G. Marcum, tr.'s No. 1 McGarry, Sec. 9-19-4 ....Derrick.

CALHOUN COUNTY

Phillips Pet. Co.'s No. 1 Freeman-Smith Lumber Co., 300 ft. S, 300 ft. W, NE cor. SW NW, Sec. 25-16-13 ....Cmtd. 15½-in. 34 ft; drlg. 1,320 ft.
Ohio Oil Co.'s No. 1 Stout Lumber Co., NW cor. SW Sec. 31-14-12 ....Drlg. 3,360 ft.

CLARK COUNTY

Wm. Henry, trustee's No. 1 Clark, Sec. 34-9-21 ....Shut down 1,200 ft.

COLUMBIA COUNTY

Arpeco Syndicate's No. 1 Dennis, Sec. 11-20-23 ....Drilled 6⅝-in. plug resting on bailing line; T.D. 3,567 ft.
T. R. Brown, trustee's No. 1 Spencer, Sec. 18-18-23 ....Drill stem test at 2,758 ft; dry; cored S.W. sand 2,994-3,000 ft; coring.
Helena Oil & Gas Co.'s No. 1 Pickler, Sec. 19-19-22 ....Shut down 2,762 ft.

FAULKNER COUNTY

Gold Creek Oil & Gas Co.'s No. 1 Stermer, Sec. 17-4-13..Cemented 6-in. 3,800 ft.

GRANT COUNTY

Jones & Watkins' No. 1 Meek, Sec. 5-4-11 ....Shut down 1,400 ft.

LINCOLN COUNTY

Pine Prairie Oil & Gas Co.'s No. 1 Carter ....Shut down 2,176 ft.

LITTLE RIVER COUNTY

Grotte and others' No. 1 Allen, Sec. 31-12-31 ....Shut down 2,941 ft.

LOGAN COUNTY

Arkansas Natural Gas Corp.'s No. 1 Hanna, Sec. 26-7-23 ....U.R. 8¼-in. 2,836 ft; T.D. 3,000 ft.

OUACHITA COUNTY

Copenhaven and others' No. 1 Warnick, Sec. 2-15-17 ....Derrick.
Flaucher and others' No. 1 Buck, Sec. 7-15-17 ....Shut down 2,465 ft.
Geo. Khouri's No. 1 A. Wilson, 150 ft. N, 150 ft. E. SW cor. N½ SW SW, Sec. 24-15-18....Spudded Aug. 1; cmtd. 10-in. 101 ft; drlg. 940 ft.
Lohman and others' No. 1 Fogle, Sec. 18-14-16 ....Shut down 1,540 ft.
Phillips Petroleum Co. and others' No. 1 Eagle Mills, Sec. 11-12-16 ....Drlg. red beds 3,360 ft.
Sundby and others' No. 1 Farris, SW cor. NW SE Sec. 27-15-15 ....Standing 100 ft. in fluid; 22 ft. broken sand; W.O.S.R; T.D. 3,093 ft.
Timberlake and others' No. 1 Wright, Sec. 25-14-18 ....Shut down waiting orders 2,907 ft.
Wesson and others' No. 1 Booth, Sec. 12-15-19 ....Shut down 2,203 ft.

PULASKI COUNTY

Wonder State Dev. Co.'s No. 1 Wilson, 599 ft. W, 24 ft. S, NE cor. NE SW, Sec. 21-2-11 ....Rig up.

UNION COUNTY

Sam Arrendale's No. 1 Gallagher & Nelson, 200 ft. N and W SE cor. Lot 5, Sec. 18-18-17 ....Cored sand 2,115-27 ft; W.O.
W. M. Coates, trustee's No. 1 McDuffie, Sec. 32-19-17 ..Setting 6⅝-in. 4,076 ft.
O. W. Estes' No. 1 Ramsey, NW cor. NW SW Sec. 24-17-14 ....Derrick.
E. L. Foster and others' No. 1 Murphy Land Co., Sec. 22-17-17 ....Shut down 1,400 ft.
Ohio Oil Co.'s No. 1, Acct. 2, Stout Lbr. Co., 330 ft. S. 330 ft. W, NE cor. NE NW, Sec. 30-16-13 ....Drlg. 2,436 ft.
Root Refineries, Inc.'s No. 1 Oliver, NW cor. SE NW, Sec. 18-17-13 ....Coring 3,198 ft.
McDonald Brothers' No. 1 Mayfield, Sec. 29-19-15 ....Shut down 2,210 ft.
Ohio Oil Co.'s No. 1 Stout Lbr. Co. Acct. 2, 330 ft. S, 330 ft. W, NE cor. NW, Sec. 30-16-13 ....Spudded July 20; cmtd. 10-in. at 261 ft.
Stark and others' No. 1 Ainsworth, NE cor. NW NE Sec. 8-19-16 ....Derrick.
T. J. Woodley's No. 1 First National Bank, NW cor. Sec. 34-19-18 ....Derrick.

VAN BUREN COUNTY

Dr. J. S. Martin, tr.'s No. 1 Scanlan, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 5-9-13 ....Drlg. 50 ft.

WASHINGTON COUNTY

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30 ....Cemented 6-in. 1,320 ft.; shut down 1,342 ft.
Lincoln Leaseholding Syndicate's No. 1 Lincoln, Sec. 30-15-32 ....S.D. 1,040 ft; repairs.

WHITE COUNTY

Letona Syndicate's No. 1 Letona, SE cor. NW SW Sec. 35-9-8 ....Cmtd. 6⅝-in. 2,975 ft; drlg. 2,980 ft.

EAST TEXAS

BOWIE COUNTY

Hooks Oil & Gas Co.'s No. 1 Lee Roseberry, L. T. King Sur. ....Temp. abandoned, total depth 3,086 ft.

CAMP COUNTY

Rogers and others' No. 1 Enfelt, R. M. Montgomery Sur. ....Tested dry at 1,870 ft.; shut down 1,920 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur. ..Claim show of oil and gas; shut down 1,893 ft.
Shad Harper's No. 1 W. R. Garland, J. Wagley Sur. ....Shut down 1,862 ft.
Johnson Petroleum Co.'s No. 2 Randolph Edward Dean Sur. ....Shut down 1,440 ft.

SHELBY COUNTY

Chapperall Oil Co.'s No. 2 Holt, Matthew Moore Sur. ..Shut down for orders 3,004 ft.
Gulf Refining Co.'s No. 1 Carraway, J. H. Patterson Sur. ....Cored blue shale 5,764-67 ft.

MISSISSIPPI

ALCORN COUNTY

Alcorn Petroleum Co.'s No. 1 Matthews, SE cor., Sec. 14-2s-7e ....Resumed drlg; made 153 ft; S.D. for new cable; T.D. 2,135 ft.

CHICKASAW COUNTY

Hightower & Golson's No. 1 Flemming, NE cor. Sec. 20-13-3 ....Shut down 1,100 ft.

CLAIBORNE COUNTY

Ben W. White's No. 1 Shannon, NE cor. Sec. 36-10-4 ....Fish. for drill stem; T.D. 2,004 ft.

HINDS COUNTY

Harry Gerson's No. 1 Edward House, Blk. 16, West Jackson Subdivision City of Jackson in Twp. 5n, Range 1e ....Rig up.
Oscar Brown's No. 1 Riverside (formerly Hennessee and others), SE cor. SE SW Sec. 23-16-5 ....Set 12½-in. 80 ft.; shut down 1,050 ft.
Mrs. Reeder and others' No. 1 State, SE cor. NW NW Sec. 25-6-1e ....Shut down 2,895 ft.

HUMPHREYS COUNTY

E. C. Steele and others' No. 1 C. B. Box, SE cor. SE NE, Sec. 25-14-4w ....Set 12½-in. 60 ft.; shut down.

LAUDERDALE COUNTY

Lauderdale Oil & Gas Co.'s No. 1 Lackey, 990 ft. S and E, NW cor. NE, Sec. 2-7-16 ....Selma chalk 1,597 ft.
Meridian Oil & Gas Co.'s No. 1 Hauser, Sec. 33-8-18 ....Drlg. hard green sand (Eutaw) 1,775 ft.
J. R. Smith Oil Co.'s No. 1 C. F. Craig, Sec. 2-6-14 ....Derrick.

MONROE COUNTY

Amory Development Co.'s No. 1 Bouriand, Sec. 2-13-19 ..S.D.; waiting for 5 3-16-in. csg. 2,580 ft.
Amory Petroleum Co.'s No. 1 Hall, Sec. 8-13-19 ....Setting liner with packer to test sand at 2,387 ft; T.D. 3,045 ft.
Arkansas Natural Gas Corp.'s No. 1 Rye ....Fishing drill stem; hard sandy shale 3,668 ft.
Park Bowser and others' No. 1 Cowart, second hole, Sec. 2-12-19 ....Shut down 30 ft.

WARREN COUNTY

El Dorado Oil Co.'s No. 1 Dornbush, Sec. 8-18-5 ....Coring hard packed sand 1,600 ft.

YALOBUSHA COUNTY

Philp Brothers' No. 1 James, Sec. 20-11-5 ....Drlg. brown shale 2,828 ft.

TENNESSEE

DECATUR COUNTY

Standard Oil Co. of Louisiana's No. 1 Wyatt ....Drlg gray lime 1,243 ft; 200 ft wtr. in hole from soft green strata at 1,212-15 ft.
Chester County Oil Co.'s No. 1 Montgomery ....Cemented 6-in. 1,040 ft.

ALABAMA

CHOCTAW COUNTY

Robinson & Greer's No. 1 Douglas Oil Co., 320 ft. N, C, Sec. 15-19-2 ....Location.

LAMAR COUNTY

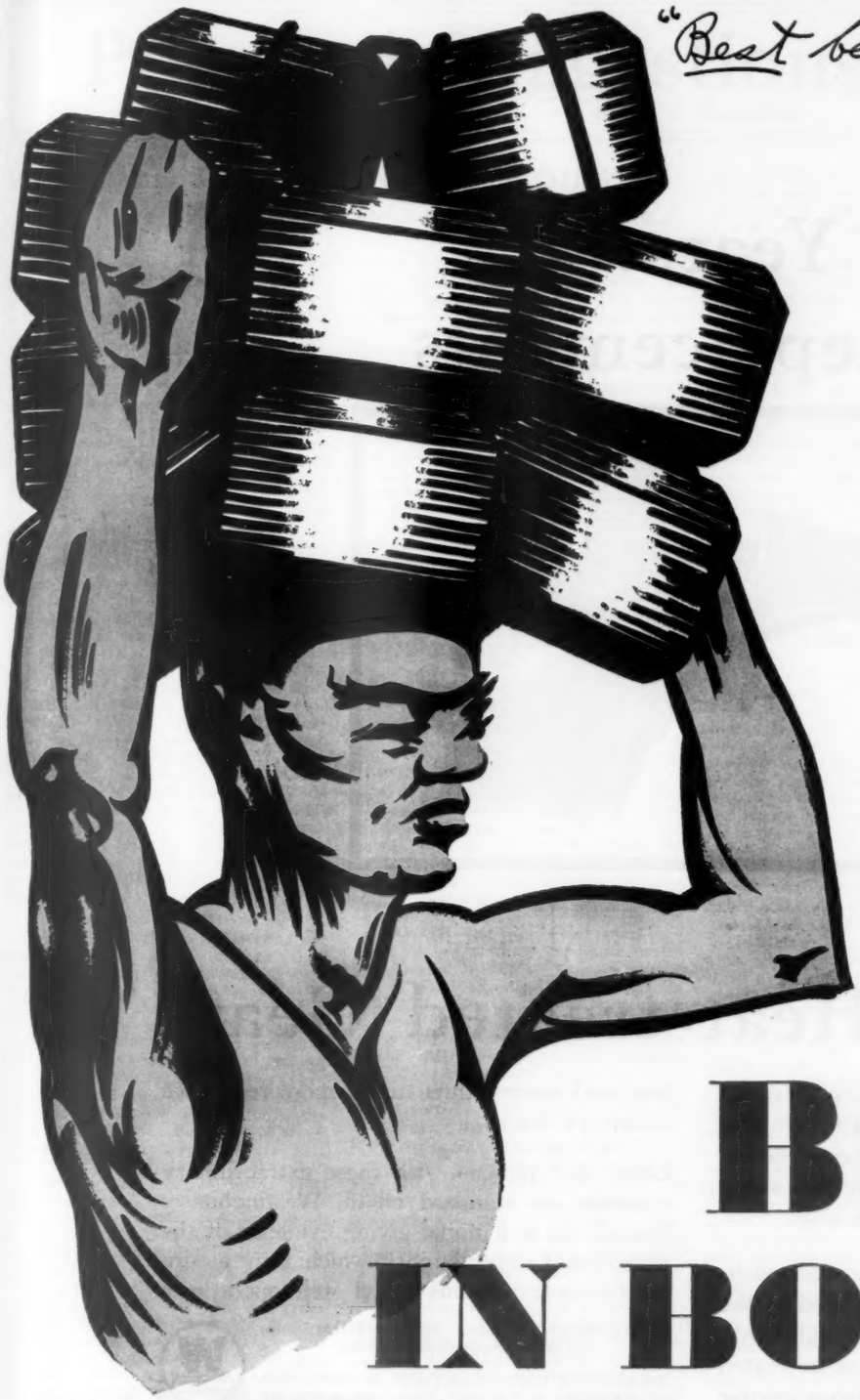
Briggs & Knapp's No. 1 Wefel, Sec. 25-12-14 ....Drlg. shale 785 ft.

WASHINGTON COUNTY

S. A. Hobson's No. 1 Hobson Bros., Sec. 9-8-2 ....Reaming to bottom; T.D. 600 ft.
S. A. Hobson's No. 1 Wilson, Sec. 27-7-1 ....U.R. at 700 ft.

NEW CANADIAN OIL TOWN

CHATHAM, Ontario, Aug. 10.—Extensive development in the south end of the Turner Valley Field has brought a new town into existence. It is called Hartell, from the farm on which the townsite is laid out. The site is about 6 miles from Black Diamond and 16 miles from High River. The town serves the territory being drilled by the Home, Mercury, Commonwealth, Sunlight and other oil companies in the south end of the field, and there are more than 20 wells drilling and 400 residents in the nearby oil camps.



BETTIS IN BORNEO

More than 5,000 Bettis Protectors are in service in wells in Borneo oil fields. Thousands of Bettis Protectors are in service in other overseas fields, including Dutch East Indies, India, Burma, Japan, Russia, Roumania, Venezuela, Trinidad, Colombia, Peru, Argentine, and Mexico. Close to 200,000 Bettis Protectors have been placed in service within eighteen months. Drillers universally recognize the necessity for Bettis Protectors in difficult rotary drilling.

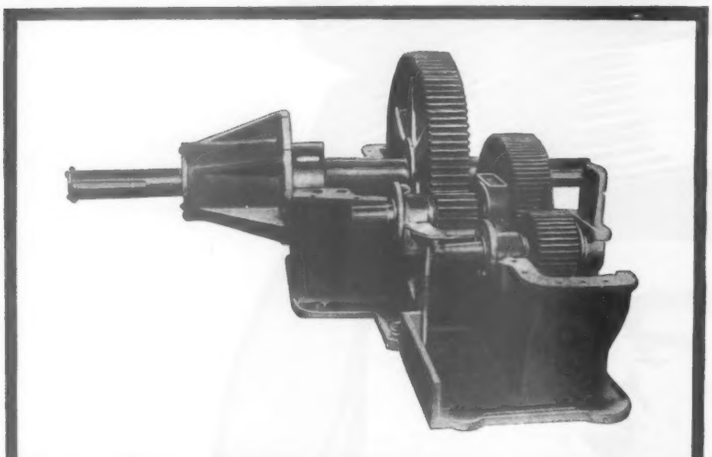
Patterson-Ballagh Corporation
Insurance Exchange Building, Los Angeles

Mid-Continent Distributors:
Bettis Sales Co., 616 Public Natl. Bank Bldg., Houston

New York Office: 39 Cortlandt St.

Carried in stock at Los Angeles, Santa Fe Springs, Ventura, Bakersfield, Coalinga, Long Beach, Tulsa, Houston, Wink, Texas; New York City.

Five Years....
No Replacements



An exposed view of a Westinghouse-Nuttall double reduction oil well unit. All gears and pinions are heat-treated by the BP process.

with BP Heat-treated Gears

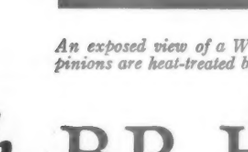
IN the more than five years since Westinghouse-Nuttall oil well gear units were first placed in service, there has never been a necessity for replacing a gear or pinion on a single unit because of breakage or excess wear.

This incomparable record is the accomplishment of gears and pinions heat-treated by the exclusive BP process. Their "tough-hard" structure is four times harder than untreated gears, capable of carrying four times greater load and having three times more resistance to impact shock.

Gears and pinions with these extraordinary qualities are standard on all Westinghouse-Nuttall oil well units, giving evidence of the exceptional dependability which they assure in the most rigorous of oil well operations.

Oil Well Supply Company, Authorized Distributor for Westinghouse-Nuttall Units.

WESTINGHOUSE ELECTRIC & MFG. CO.
Nuttall Works Pittsburgh, Pa.



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Insulating Materials
Motor Control
Panelboards
Rig Lighter Sets
Safety Switches
Twin-motor Drilling Equipment
Two-speed Pumping Equipment

Practical Suggestions in Refining

By W. T. Ziegenhain

VACUUM DISTILLATION OF LUB OILS FAVORED IN MID-CONTINENT AREA

Considerable study is being given the principles of vacuum distillation as applied to lubricating oils by Mid-Continent refiners as evidenced by the number of vacuum units recently put in operation and those under construction. This interest is further evidenced by the fact many major companies have the installation of such units under consideration.

At present the Tidal Refining Co. is operating a new 1,500-bbl. unit at Drumright, Okla., the Sinclair Refining Co. has started up a new 1,500-bbl. unit at Coffeyville, Kans., the Shaffer Oil & Refining Co. has a 2,000-bbl. unit under construction at Cushing, Okla., and the Continental Oil Co. will soon complete a 5,000-bbl. unit at Ponca City, Okla. Those companies considering the addition of such units to their plants include a 1,500-bbl. unit for the Champlin Refining Co. at Enid, Okla., a 2,500-bbl. unit for the Empire Oil & Refining Co.'s plant at Ponca City, Okla., a 2,500-bbl. unit at the Barnsdall Refineries, Inc., at Barnsdall, Okla., a 2,000-bbl. plant at the Skelly Oil Co.'s refinery at Eldorado, Kans., a 1,500-bbl. unit at the Bristow, Okla., plant and a 2,000-bbl. unit at the Fort Worth, Tex., plant of the Transcontinental Oil Co., a 3,000-bbl. unit for the Pierce Petroleum Corp. at Sand Springs, Okla., a 1,500-bbl. unit at the National Refining Co.'s plant at Coffeyville, Kans., and a 3,000-bbl. unit at the Mid-Continent Petroleum Corp.'s West Tulsa, Okla., plant.

Justification of Method

Vacuum distillation of lubricating oils is not new to the industry but has gained popularity in the Mid-Continent because of the desire of those refiners to increase their yields of lubricants from the crude and to improve the quality of the products made. The improvement of the quality is due principally to the fact that vacuum distillation permits a narrower distillation range on the respective cuts and the distillation may be carried on at temperatures below those at which noticeable cracking takes place.

Since a larger proportion of the motor oils manufactured contain bright stock and there is a decided tendency toward the use of more bright stock as a result of the demand for high viscosity oils, the interest is principally focused on the manufacture of these stocks.

The use of vacuum distillation will produce a cylinder stock of closer distillation range, and relatively free of coloring matter. As a result the stock has a lower flash and fire for a given viscosity, a lower carbon residue, a more constant viscosity for a given temperature change and may be more economically processed to make into bright stock. It has the disadvantage in producing a steam refined stock in that the stock has a higher pour point than the residue stock of the same viscosity but this fact merely emphasizes the value of the vacuum distillation since the pour point is depressed by the presence of asphaltic materials which in reality are impurities. In the vacuum process these have been retained in the still as a residue during the distillation of the overhead stocks but in the ordinary method of atmospheric distillation, these residues remain in the stock as a residue when the still is pumped out. Similarly, if this residue stock is treated with acid to remove these asphaltic materials, the pour point of the resultant stock will be materially higher also.

Distillation Characteristics

If an overhead cylinder stock were made under the ordinary methods of atmospheric distillation it would generally require still temperatures up to 920 degrees Fahrenheit. In comparison, the vacuum process will produce the same overhead stock with temperatures under 770 degrees Fahrenheit. In the tower, the vacuum processed stock will probably be no hotter than 660 degrees Fahrenheit. Even at 770 degrees Fahrenheit there is a chance for cracking to take place in the still and for this reason, the design of the still is of major concern.

If the outlet temperature of the still is held at 770 degrees Fahrenheit it is likely that at certain points in the still, the temperature is higher. The problem in still design resolves itself into one of holding the velocity of the oil flow sufficiently high to cause a turbulence and quick heat exchange between the walls of the tubes and entire core of oil to hold the temperature at all points at or below the outlet temperature.

There are two schools of thought on how to obtain this velocity. The one group recommends installing relatively large tubes in the furnace to reduce the friction and to obtain a high velocity of flow by partial vaporization of the oil in its progress through the still. The vapors build up a pressure and tend to push the oil on faster. The other group recommend installing relatively small tubes in the stills, holding the oil in the liquid phase practically throughout the length of the flow through the still. The velocity of the oil flow through the tubes will be in proportion to the area of their cross section. As an example, the one group might supply a 4-inch tube in a 2,500-bbl. unit while the other group would supply a 2½ to 3-inch tube. A test of the effectiveness of the respective designs is to determine the temperature of the oil at many points in the still and if the temperature at any of these points is materially above the outlet temperature, there is a greater chance for cracking to take place and there is an insufficient amount of turbulence or too low a velocity at that point.

Removal of Coloring Matter

The removal of coloring matter is the next important factor in the process for the effectiveness of this usually determines the cost and the amount of treating and filtering to be done later. Apparently, the coloring matter has a higher distillation range than the cylinder stock and it is segregated in the vaporizer as a residue, as the stock distills overhead. There is always some coloring matter which distills over with the stock and this has the same boiling points as the stock. The amount of coloring matter carried overhead is dependent upon the degree to which the distillation is carried out and it is possible to carry high enough temperatures to reduce the residue or coloring matter to a dry, black tar. Each refiner must determine the point in his processing where he must halt the concentration of the residue or in other words, he must determine the optimum temperature to carry in his vacuum distillation to give him a maximum yield of the overhead cut that meets the viscosity and flash specifications and yet producers a stock which does not call for a great amount of treating and filtering.

The coloring matter that remains in the overhead stock must now be removed by treating. Obviously, the treatment needed to remove this is much lighter than that needed to remove the entire volume of coloring matter originally in the crude. As an example, a residue stock requiring 40 pounds of acid per barrel to bring it up to color for processing as bright stock would show a treating loss of from 38 to 40 per cent. The overhead stock of a comparable distillation range would require from 8 to 10 pounds of acid and would show from 3 to 8 per cent loss in volume. The latter treating loss combined with a loss of 10 per cent as the yield of residue coloring matter brings the total loss on the vacuum process to less than half the former.

The statement was made that the coloring matter acted as a solvent for the wax and for that reason, when the coloring matter is removed, the pour point of the stock is increased. The action of the coloring matter seems to be one of partial solvent action or possibly, effects a condition whereby the wax is held as a colloid. In this state the wax is said to be amorphous and is distinguished from the crystalline wax produced which forms

(Continued on Page 141)

Short Lengths of Junk Pipe Utilized In Building Frames

The use of junk pipe in constructing the framework of small buildings is coming into more general use at refineries and an excellent example of what may be done is shown in the accompanying picture. This building is to be a covering for the engine and reel that pulls the cable from the Dubbs pressure still chamber during cleaning of the unit and is being built by the H. F. Wilcox Oil & Gas Co. at its Bristow, Okla., refinery. The framework is made entirely of scrap pipe of small diameter and all joints are welded.

Such a building may actually cost more to construct than a fabricated building from the standpoint of labor but in a small plant, where the welder is not kept busy at all times, such jobs afford a means of utilizing his time to advantage and it is during these periods such work is planned. Such jobs must be chosen which do not have a definit time limit, however, if the labor is to be figured as fill-in, and it is not always possible to do this for in most cases refinery construction is a matter of rushing the job through.

The framework shown here is made of 2-inch standard pipe and braced with 1½-inch pipe. Galvanized iron sheets will be bolted to the framework to enclose it. The framework is uniformly built in sections running from the front back so it may be added to without materially disturbing the rest of the building.

Other refinery buildings that may be built in this manner, because they do not ordinarily involve a time factor, include garages, sheds for fire apparatus, locker rooms and tool sheds.

Recent Patents

USE TIN AS CATALYST IN HYDROGENATION PROCESS

1,723,431. Process of Obtaining Liquid Products from Coal and the Like. Michael Melamid, Berlin-Zehlendorf, Germany. Filed December 5, 1924, Serial No. 754,207, and in Germany November 17, 1921. 6 Claims. (Cl. 196—56.)

1. The process of obtaining liquid products from coal and the like, which consists in heating the same with tin under pressure and at a temperature, substantially not exceeding 600 degrees Centigrade and forcing a current of hydrogen into the material during the heating thereof.

PRECIPITATE WAX WITH LITHARGE

1,722,307. Process For Dewaxing Oils. Leslie W. Naylor, Florence, Colo., assignor to Continental Oil Co., Denver, Colo., a Corporation of Maine. Filed June 7, 1927. Serial No. 197,233. 18 Claims. (Cl. 196—18.)

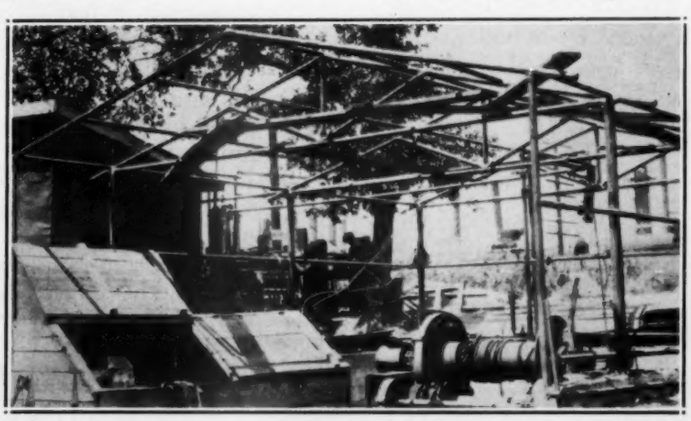
1. The method of treating a long cut residuum for the separation of wax and oil which comprises adding to the residuum sufficient diluent capable of rendering the wax content incompletely soluble at a low temperature, cooling the diluted mixture to such temperature, and precipitating the wax from the sustaining solvent by the influence of particles of litharge.

CONTROL CRACKING BY COOLING

1,715,980. Process of Cracking Oil. John C. Black, Destrehan, La. Filed October 20, 1926. Serial No. 142,997. Six claims. (Cl. 196—49.)

1. A process of cracking crude oil residuum for the production of a relatively small amount of low boiling hydrocarbons, a relatively larger amount of higher boiling hydrocarbons, and a residuum suitable for fuel oil, which comprises, passing a crude oil residuum through a series of cracking coils, under superatmospheric pressure and at a temperature sufficient to lightly crack the same, and preventing further destructive decomposition of the hydrocarbons of said crude oil residuum by the introduction of a cooler hydrocarbon oil into the final passes of the last cracking coil, in quantities sufficient to maintain the said crude oil residuum below the temperature of excessive cracking and carbonization.

(Additional Patents on Page 176)



Frame of building being constructed entirely of junk pipe welded together to make a permanent structure at a relatively low cost.

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MAIL your advertisement now. It will be published next week. Cash with order.

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Two large Sweetland Filter Presses. Give full details and price. Box D-52, The Oil and Gas Journal, Tulsa, Okla.

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Louisville, Ky.

WANTED TO BUY. Two 300 to 350 HP A. S. M. E. Code Water Tube Boilers. 175 lbs. steam, or better. Give full description and age. ½, ⅝, ⅝ and ¾ used wire lines, all 6 by 19; state lengths and how many reels each size, and best prices. Address Box D-79, The Oil and Gas Journal, Tulsa, Oklahoma.

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All sizes in casing and line pipe from 2" to 15½" inclusive.
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FOR SALE—One Turnbuckle Standard Rig, 5-inch irons, steel bull wheels, steel band wheel, steel walking beam, 45 H.P. boiler, 11½ by 12 Ajax engine. Complete string tools. Two thousand feet 6⅝-inch, 20-pound California casing new.
Wm. H. Cater,
2643 Monroe Street,
Chicago, Illinois.

FOR SALE
3—100 ton Ball Horizontal Ammonia Compressors.
1—160 HP Rathbun Jones Vertical Gas Engine.
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All in first class condition. Will sacrifice at a few cents on the dollar. E. S. Calvert, Phone 2-4372. P. O. Box 1441, Tulsa, Okla.

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Wichita Falls, Holliday, Vernon, Breckenridge, Pampa, Texas.
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KEYSTONE PIPE & SUPPLY COMPANY
Holmes Building
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FOR SALE—ONE CHARCOAL ABSORPTION GASOLINE PLANT. Location, Langley, Kentucky. Capacity, 3 million cu. ft. per day. Good condition, ready for immediate shipment. Also 2—6"x24" Cook Deep Well Pumps.
United Carbon Company,
Charleston, West Virginia.

STANDARD TEMPER SCREWS 50 per cent regular price to reduce excess stock. United Iron Works, Inc., Hunt Bldg., Tulsa, Okla. Phone 4-9181.

FOR SALE — Complete set Standard Tools. 12x12 AJAX engine (NEW). 2,000 ft. 6⅝--inch, 24-pound. 700 ft. 10-inch, 52-pound. 1,500 ft. 2-inch pipe. F. E. Turner, 217½ Broadway, Muskogee, Okla.

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240 Ouray Bldg., Washington, D. C.

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OIL MUST BE CONTROLLED. INSA-LUTE Cement (liquid Porcelain) will resist oil, acids, fire and most solvents. Used all over the world. Trial gallon $4.00. Ask us about your cementing problems. TECHNICAL PRODUCTS CO., Pittsburgh, (6) Pa.

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YOU can make BIG money helping to develop the gold mining industry of Colombia, South America. For particulars address Davidson, 201 First National Bank, Denver, Colo.

FINANCE. Underwriting service. Barrick. New Martinsville, W. Va.

FOR SALE—SILVER FOXES

FOR SALE—Silver Foxes, or will trade for a producing royalty. These foxes are inspected and registered by American National Association and have averaged an annual profit of better than 170 per cent for past four years. Price $800 per pair, or $1,200 with 100 per cent guarantee. Can furnish from one fox to 200 pairs. Not over 10 pair taken on a royalty trade. S. B. Chambers, 1046 E. 30th, Erie, Pa.

ADDRESSES WANTED

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DESIGNER—Graduate M. E. 10 yrs. experience in mechanical and structural design. 4 yrs. refinery experience. At liberty about Sept. 1. Box D-54, The Oil and Gas Journal, Tulsa, Okla.

GRADUATE ENGINEER—Four years with major oil company, natural gasoline and statistical work. Wants position in natural gasoline or production department. Address Box D-60, The Oil and Gas Journal, Tulsa, Okla.

CONSTRUCTION ENGINEER with 16 years experience with major companies in refinery, pipe line, gas compressor station and other petroleum industry construction work in responsible positions desires connection with growing concern. Engaged at present and is good organizer and executive who can get results. Can handle any size job. Reply care Box D-31, The Oil and Gas Journal.

GRADUATE GEOLOGIST, age 24, unmarried, desires position. Prefer subsurface department. Willing to accept small salary to start. Best references. Available at once. Write Box D-70, The Oil and Gas Journal, Tulsa, Okla.

ENGINEER and operator with 10 years' experience, consisting of refinery engineering and operation of Shell Stills, Dubbs and high-pressure units; capable of design, construction and operation. Qualified for chief engineer or manager. Box D-72, The Oil and Gas Journal, Tulsa, Okla.

EXECUTIVE of small oil company and former purchasing agent desires selling connections to handle specialty lines in Mid-Continent and Texas areas. Either salary or commission basis satisfactory. Must show possibilities of good income. Address Box D-77, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

DRAFTSMAN—Experienced in oil refinery. Layout and design. Graduate engineer preferred. State age, education, salary and experience in first letter. Permanent position to right party. Shell Petroleum Corp., Arkansas City, Kans.

WANTED—Natural Gas Engineer and Executive. Must have practical experience in construction of main line and distributing systems, ability to make gas sales and purchases and thorough knowledge of general executive work. Give full details of previous employment, number of years and salary desired. Address Box No. D-75, The Oil and Gas Journal, Tulsa, Okla.

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ENGRS., DRAFTSMEN, SUPERINTENDENTS, CHEMISTS, PLANT MAINTENANCE, STILLMEN, and other highly trained refinery employes, for placement with major companies. Give age, education, complete record and when available. Technical Division, Co-Operative Employment Service, 300 Board of Trade Building, Kansas City, Missouri.

DRAFTSMAN capable of handling design as well as detail work. Familiar with refinery and general oil field drafting. Experience and sample of work to accompany application. Chief Engineer, Empire Companies. Bartlesville, Okla.

WANTED—Designing draftsman and checker with experience in natural gasoline compression and absorption plant design. State in first letter age, education, experience and salary expected. Excellent opportunity for right man. Location, Tulsa, Okla. Write D-71, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Young man with engineering and operating experience in the distribution division of the gas industry, to become Sales Engineer for long-established manufacturer of recording instruments for pressure, temperature; and automatic controllers for temperature, pressure and humidity. Candidates preferred who have had both industrial experience and scientific education, and who are free to travel through the great industrial districts. Highest character references required. Write, stating experience, age and salary desired. Write D-73, The Oil and Gas Journal, Tulsa, Okla.

WANTED—By large Oklahoma Oil Company a man of long warehouse experience to take charge of this company's warehouse system. Must be experienced, honest, competent and possess executive ability. His record must bear closest scrutiny. An exceptional opportunity for the right man. Furnish references as to character, ability, salary wanted, full experience, etc., in first letter. Application considered confidential. Write D-76, The Oil and Gas Journal, Tulsa, Okla.

CHIEF CHEMIST WANTED for large independent oil company. Must be thoroughly familiar with the manufacture of Lubricating oils from Mid-Continent Crude Oil. Will have charge of a number of Refinery and Blending Plant Laboratories. In application give education, experience, age, and salary expected. Box No. D-80, The Oil and Gas Journal, Tulsa, Oklahoma.

DRAFTSMEN. We require several thoroughly experienced draftsmen in our Oil Refinery Department, capable of designing the equipment for Pipe Still Distillation Units, such as the Still, Fractionating Towers, Pump House, Piping, Etc. Give complete details in your application, age, past experience, salary, and when available.
ARTHUR G. McKEE & CO.
2422 Euclid Avenue
Cleveland, Ohio.

WANTED: HIGHLY CAPABLE SALESMAN familiar with oil and gas pipe line practise, to sell high class line of equipment. Must have reasonable mechanical ability and willingness to work hard and travel large portion of time. Reasonable salary and expense at first with splendid opportunity for early advancement. Must be sober and give best of references. Address reply to D-78, The Oil and Gas Journal, Tulsa, Oklahoma.

FACTORY REPRESENTATIVES. Salesmen, Insa-Lute Cement (liquid porcelain) will resist oil, acids, and fire. Used in leading laboratories for sealing, painting, cementing, etc. Volume business to be had in the oil and gas industry. Nothing like it on the market. TECHNICAL PRODUCTS CO., Pittsburgh, (6) Pa.

WANTED AT ONCE: MAN with petroleum marketing experience both bulk and service stations for supervision operations in territory comprising eight bulk stations and thirty-five service stations. Give full particulars, age, salary, and experience. If convenient enclose photograph. Address reply to Box D-81, The Oil and Gas Journal, Tulsa, Okla.

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Chicago Gasoline Market More Active

Larger Refiners Advance Their U. S. Motor Price to 7¾ Cents. Active Spot Demand for Prompt Shipment

By J. B. Waldo

CHICAGO, Aug. 12.—The gasoline market was more active today and the feeling distinctly improved. The larger refiners advanced their price for U. S. Motor gasoline to 7¾ cents and the advance was followed by other sellers who were usually selling at 7½ cents. Some of those who advanced their motor gasoline also increased the price of the higher gravities one-fourth cent while others held their former prices for these higher tests owing to the lack of active demand for these products. There was quite an active spot demand and little difficulty was met in selling at 7½ cents. The demand continued to be for prompt shipments and some of the orders were for a larger number of cars although jobbers are still buying chiefly for their present needs. Orders on contracts were large, the price being attractive compared with the spot market. Occasional price concessions were made of one-eighth cent but there was only a limited quantity of distress material and prices were better maintained. As Tuesday has been for some months a better buying day than this first day of the week the trade expects an even larger demand to follow but today's orders have been partly in response to the advancing prices and may be in anticipation of further increases as it is commonly stated that by next week the market will be at the 8-cent level.

Kerosene was quiet and some refiners dropped their price from 5½ to 5¼ cents. There was considerable inquiry regarding furnace oils and both distillate and zero gas oil were strong today. Several refiners stated to jobbers that they were out of the market for both products as their contracts were so large they were at present holding supplies for their own future requirements. The market was only fairly active in industrial fuel oils and while the feeling was that the market was some stronger, there seemed to be little change in the prices quoted, most sellers having material bought at lower costs than the present quotations by refiners which, in several instances, were higher. Others have withdrawn all prices on industrial fuel oils. The week-end was very favorable for touring and the gasoline consumption locally at least was very large.

Spot Price Advance

Last Thursday afternoon the major refiners notified their sales offices in this city to advance their spot price for U. S. Motor gasoline to 7½ cents Group 3 basis. Several had held that price not making the full reduction to 7¼ cents. The statement was made that stocks in the Mid-Continent Field showed a considerable reduction over July and that refinery runs had been reduced and that further reductions of crude runs were planned. Right on top of the decrease in stocks and refinery runs had come a good shipping business. It was stated that contract customers are ordering freely and the spot demand is showing some improvement due to the continued heavy consumption. The consumption will undoubtedly continue on a very large scale over August as this is the peak month and has been so proven by the experience of some of the older companies whose records extend back to the war period. The statement was also made that several of the refiners who had been selling at the recent low prices quoted to marketers and in some cases to the trade direct were sold up for the present and would be out of the market for immediate deliveries. In several cases some of these refiners were not only asking higher prices at the close of last week but stated they cannot accept orders for delivery at once. There has been some buying between refiners and with the heavy consumption and the low condition of stocks in the jobbers' tanks, a little more of this buying might bring about one of those sudden changes which are not infrequent in the petroleum industry.

Freak Market

The gasoline market during July was a sort of freak market. Gasoline was very freely offered and pushed for sale at a time when the jobbers were not obliged to buy in quantities as their supplies were large from earlier purchases and this permitted and in fact forced considerable accumulations of gasoline with some refiners who in turn tried to increase their sales by naming lower prices. Now there is a different condition. Jobbers have been reducing their stocks of gasoline largely for fear they might have a reduction in the tank wagon scale. They have a large business ahead of them during August and September. The latter month, according to records extending over more than a dozen years, is just about on a par with July in the quantity of gasoline consumed and while the comparison is not as uniform between June and October the average is about the same in quantity consumed and not infrequently October is better than June, much depending on the weather condition during the two months. There are some well posted oil men who see good reasons to expect the price for U. S. Motor gasoline will advance shortly to 8 cents, Group 3 basis. The factor that has worked against better prices for gasoline in this territory over the entire season has been the large production of gasoline by others than the major refiners and in other sections than the Mid-Continent Field.

Gasoline is available at present to buyers at great distances from the point where it is refined. Last week one of the large nearby refineries made a price of 10 cents for U. S. Motor gasoline delivered at Detroit and did this because some California gasoline was being sold in that city at that price. Of course there are important freight costs involved in such a sale but water transportation by tank ship is cheap compared with rail transportation in tank cars. With cheap crude and low refining costs such sales are possible and the shipments from California to the Atlantic Coast ports are running very large. Gasoline out of Franklin, Pa., has been selling at some Indiana points and the buyer for one large oil company stated his freight rate to many southern Wisconsin points from Franklin was just the same as from Group 3 so he had a choice of refining centers as well as of refineries in each center and could and did buy where he could buy the cheapest.

Market Condition

Although the gasoline demand last week showed some improvement in spot purchases and the takings on contract were stated by all major refiners to be good, the prices quoted early in the week failed to show any evidence of strength. What was claimed to be good U. S. Motor gasoline was freely offered to marketers at 6¾ cents and some gasoline for an eighth less. In some instances the 6¾-cent quotation was made direct to jobbers, the quotation having been seen and so reported by responsible and careful sales managers. The number of such quotations is not known but practically every good jobber had prices as low as 7 cents. With the advance in prices made by the major refiners Thursday, these prices disappeared and as the week closed quotations showed an advance and the tone was much better. Of course there is always a point at which the market is bound to show some reaction after a long movement in one direction. This movement is frequently compared to the pendulum of the clock which cannot swing indefinitely one way but is bound to retrace its course. The question right now is to what point will the price for U. S. Motor gasoline advance? It does not seem at all likely it will stay at 7½ cents neither does there appear to be any chance for its advancing to the peak price of the season to date which was 9¼ cents. At the close of the week there were many predictions as to price and many agreed gasoline should sell at at least 8 cents with a possibility that a little higher market might be established.

Jobbers Stocks Low

The spot demand last week indicated low stocks in many jobbers' storage. A great many orders called for cars in transit and practically every one was given with the understanding the shipment was to be at once and delivery in as brief time as possible. Jobbers are not buying beyond their immediate necessities but if the thought there would be a tank wagon decline could be removed they would be likely to order at least a little further in advance of their requirements from week to week. Nothing would do more to remove such an idea than a stronger Group 3 market for gasoline. Low costs for gasoline bring on price cutting which in turn causes local tank wagon reductions and if these increase in number state or territory-wide reduction follows. With the price for Mid-Continent gasoline placed on a basis of even 8 cents any change in the tank wagon situation would seem unlikely at least for a period which might extend well into the fall season. In fact refiners have claimed that with present costs of crude 8 cents does not do much more than cover the costs of doing business and leaves them but a small margin of profit.

The situation to the east of this territory and in the eastern border of it has been indicated in the statements made regarding prices quoted and sales made in Detroit and Indianapolis and of course there are many other points where like conditions prevail. In Ohio the recent reduction in both the tank wagon and station prices and the delivered price of gasoline in tank car lots has not been sufficient to stabilize the market in the face of continued keen competition. Local adjustments have been made in several counties, largely in the southwest where the gasoline from other adjoining states is most freely offered to distributors. The Standard Oil Co. of Ohio has found it necessary to reduce the tank wagon at such points 1 and 2 cents and to offer even more liberal discounts than have prevailed. Salesmen who travel in Indiana say conditions are rapidly becoming about as bad as in Ohio. They also mention that jobbing concerns are being taken over by large companies, some of them located in Ohio, until it is hard to tell who to call on with any prospect of securing business. The Cities Service Co. is preparing for the operation at an early date of the new Empire refinery at East Chicago by adding to its string of stations in Indiana as well as in Ohio.

Antiknock Market

There has been no change in the position of the antiknock gasolines unless it be a larger demand and more refiners seeking to supply the desired product. The current trend is shown by the announcement made by the Shaffer Oil & Refining Co. that it had secured a license to manufacture and sell Ethyl Gasoline in 12 states, 9 of which were in the Standard Oil Co. of Indiana territory and outside of that territory in Nebraska and Arkansas. The fact that it did not take out a license for Michigan strengthens the belief current in this market that this state will shortly be in the Ohio class with so many refining centers outside and within the state competing for the limited business that the Mid-Continent refineries might as well save money and effort by not trying to sell in that state. Natural gasoline was a little stronger at the close of the week partly in sympathy with the better tone in the gasoline market as a whole. The higher gravities have been dull and one large refiner has been offering for some time to sell the 64-66-375 and the 68-70-360 at the same price, the price named to some last week being 8 cents Group 3, for either product.

Kerosene Uneven

Kerosene is showing the same uneven demand as for several weeks. One refiner will state his business is good and show records for substantial sales made. Another will state business is dull. There has been no change in prices here. Considerable distillate is being used for tractor fuel. Some of it was used last year and the practice seems to be growing. Some concerns with contracts with jobbers for distillate and gas oil requirements have stated they were shipping some distillates but no gas oil and did not connect that fact with the use of distillate for motor fuel. A good distillate with a 38-40 gravity or even less at times may have as low a flash and endpoint as kerosene, sometimes a lower flash point than is considered desirable or necessary for kerosene. Any clean distillate with a flash of 175 degrees or under and an endpoint of not over 600 degrees would work satisfactorily in most makes of tractors especially during the summer.

There is some complaint among tank car distributors regarding the attitude of refiners as to their distillate supplies. The refiners seem very reluctant to commit themselves as to the prices or quantities of distillate they may have to sell during the coming season. One large marketer-refiner said he tried for 3 weeks to secure a definite statement from one refiner from whom he had bought largely last season and could not get anything definite so he has made a contract for a portion of his requirements elsewhere. This buyer believes the refiners know now and will not have any additional information a month from now on which to base their price but are simply holding back in hope they may be able to secure a better price. In the meantime some buyers are going elsewhere for their supplies. While this situation is being ironed out the spot demand is light and forwardings on contract practically at a standstill. There will be little real furnace oil business for another 30 days. Local distributors have signed up a much larger gallonage with consumers all report than last year. The number of installations is much larger and the outlook bright for a season of large consumption and it is also most likely there will be more furnace oil available for the consumer at least. Some large integrated companies which did not have as much furnace oil as they were required to deliver last season have increased their storage and will have ample stocks this season unless the unexpected happens. Distillate prices are firmly held and some refiners are quoting slightly higher prices.

Gas Oil Unsatisfactory

The gas oil situation continues rather

(Continued on Page 141)

Gasoline Markets Softening in East

Fairly Stable Market for Other Products Is Reported, Although Cylinder Oils Are Still in Unsettled Position

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, Aug. 12.—Further softening in gasoline markets with a general expectation of a reduction in the open-market basis has been the principal development of the week in the East Coast area. A fairly stable market for other products is reported, although cylinder oils are still in unsettled position, with the undertone inclined to softness.

Spot gasoline is running quite contrary to the usual order of things in the East this year, as is true likewise of other important market centers. With consumption running at record-breaking levels, and the gain in production, from a local territorial standpoint, not keeping pace with this increase, the market position nevertheless is seriously affected by the weakness in Group 3 and California, with prices declining at a time of year when an advance is normally in order. The situation is, of course, intensified by the broader competition throughout the entire eastern territory, which has given rise to many rumors which, to say the least, have had a disquieting effect upon markets along the Atlantic Seaboard.

Export markets are working into extremely quiet position as a result of the maintenance of the export schedule in the face of declining domestic markets. For example, with Navy still held at 8½ cents at the Gulf, it is possible now to buy this grade of gasoline at the Gulf and lay it down in New York at 8¾ cents per gallon. The continued quiet in buying for shipment abroad has created a condition at the Gulf which is expected to add still further to the worries of eastern marketers and refiners, Gulf gasoline at 8¾ cents laid down at New York offering an attractive speculation in the face of a nominally quoted open market of 10 cents for the same grade at the principal East Coast terminals.

Fuel oil prices have not been changed, but the market position is extremely strong and the trade is rather bullish on the outlook for a higher market for bunker "C" by late fall in the event that the tanker market holds at or near current high levels.

Tank Car Gasoline

The market is nominally quoted unchanged at 10 cents per gallon, but it is no secret that buyers can obtain all the U. S. Motor they may require at 9½ cents from leading factors. Sellers quoting at the 10-cent level admit candidly that they are meeting the 9½-cent competition wherever it develops, virtually establishing the market at the lower figure.

Philadelphia sellers are credited with precipitating the latest market decline, offering for delivery over the entire month at 9½ cents and forcing local interests to meet this figure. There are apparently well authenticated reports that tank car business has been done this week at 9¼ cents on the part of several small interests.

One report in the jobbing market, not yet confirmed, states that independent sellers have been offering for shipment over the balance of August and all of September at 9 cents per gallon for U. S. Motor in tank car lots.

There is no disguising the fact that the gasoline market in this area is extremely soft, and notwithstanding the continued favorable volume of business, a general price cut in the wholesale basis is believed to be but a matter of time.

Tank Wagon Gasoline

Interests which a few weeks ago were speculating on the possibility of a general markup in tank wagon and service station gasoline prices in the eastern territory have now turned their thoughts to the other side of the picture, and are wondering how long the present basis can be maintained in the face of the weak wholesale market.

There seems to be a general feeling, however, that tank wagon schedules will hold up fairly well until the peak of the motoring season is over. Although tank wagon competition is keener now than for some time past, the pressure to sell is not as intense as in wholesale markets, owing to the fact that principal interests are also important factors in the retail picture through their ownership of filling stations.

Considerable shading of posted retail prices is still being done on both the independent and the principal brands, although on the latter the price cutting appears confined to independently-operated stations, the company-owned filling stations adhering to listed prices.

Kerosene

With gasoline markets sagging, kerosene is likewise showing a weaker trend. The tank car market for water white is still nominally 8 cents at refinery terminals, but it is safe to state that by far the largest proportion of current business is going through at 7¾ cents, with some sellers reported even shading on the inside figure. Demand has shown a little improvement, but the situation is still far from satisfactory from the refiners' and marketers' standpoint. Export trade has been rather sluggish and this condition has been a factor in softening up the domestic situation, through the throwing of larger quantities of current production on the domestic markets.

Tank wagon kerosene sales are picking up somewhat, and the outlook is reported more favorable in several sections of the territory. The quotation continues held at 15 cents per gallon, all of the principal marketers in this area holding at that figure. There is fair buying of kerosene in agricultural sections for use as tractor fuel, it is reported.

Fuel Oil

Firmness continues in the fuel oil market, but as yet there has been no change in the quotation on bunker "C." Withdrawals against standing contracts continue heavy, and the possibility of a markup in price is coming in for quite a good deal of discussion among refiners and consumers as well.

In some quarters of the trade the belief is expressed that fuel oil will be at $1.20 a barrel or higher by the first of October, this belief being based upon the continuance of the present high market for ocean tankers.

While the possibility of increased competition by California fuel oil is believed to be under consideration by East Coast interests in connection with a possible advance on bunker "C" here, it is pointed out that the very fact responsible for the current strong market on fuel oil, that is, shortage of tankers, would act as a bar to any great influx of Pacific Coast fuel oil in eastern markets.

Scarcity of tankers for transporting crude from West Texas and Venezuela to North Atlantic refiners has brought about an average advance of about 20 per cent in charter rates during the past several months. However, the rate for shipments from the Pacific Coast to the eastern seaboard has also moved up in proportion. Assuming that the East Coast market were to go to $1.25 on bunker "C," California refiners would not be able to gross more than about 45 or 50 cents a barrel for fuel oil, out of which all handling charges would have to come. Under these circumstances, it does not appear that the possibility of renewed competition by California fuel oil is much of a menace in the East. However, competition from West Texas, Mexico and South America is another matter, and this angle of the situation is likewise coming in for serious consideration.

Industrial demand for fuel oil has eased off a little, as is normal during the warm summer season, but refiners are expecting an improvement from this quarter within the next six weeks.

Lubs

There has been a fair amount of buying for late August shipment, particularly on bright stocks, but the spot market has quieted down further. A number of refiners have withdrawn from the market, being unwilling to put out offerings at low prices in the face of current lack of demand. The statistical position showed a little improvement in June, with stocks on hand at the close of the month down to 8,016,000 bbls. from the 8,370,000 bbls. on hand at the start of the month. This reduction reflected a curtailment in output, however, production for the month being 2,928,000 bbls., against 3,005,000 bbls. in May. Domestic demand was smaller in June than during the previous month, although exports showed a gain of 45,000 bbls.

While refiners concede that the peak of prices for the year has probably been reached and passed, they are unwilling to consider some of the extremely low bids which they have been receiving from export operators and domestic compounders during the past few weeks. It appears to be generally felt that the market will stabilize itself somewhere within a few cents of the currently prevailing levels, and refiners are now directing their efforts toward effecting this stabilization. Reports from the field in Pennsylvania indicate that refiners are curtailing their output in an effort to bolster up the market position and these reports are borne out by the general unwillingness on the part of refiners to book far ahead on the basis of currently prevailing prices.

Conditions are without change in red and pale oils this week. The demand is well maintained along routine lines, and prices appear to be fairly steady on all grades. Refiners are looking for improvement with the turn of the month, industrial activity normally speeding up after the Labor Day holidays.

Paraffin Wax

There has been a slightly better inquiry for the higher melting points this week, and the market is fairly steady. Refiners have booked a fairly substantial volume for delivery over the remainder of the month, and prompt shipment offerings are not excessive.

Buyers are still showing bearish views on the market, but refiners are countering this by withdrawals from the market. The statistical position of paraffin is far from strong.

Petrolatum

Domestic buying has been along quiet lines throughout the week, the market position having shown no radical changes. Snow white is still quoted at 8⅜ cents per pound in car lots at Bayonne, with lily white 1 cent cheaper. Cream is moving in limited volume at 6⅜ cents per pound on the spot position. The market for dark green is unchanged at 1.90 cents per pound, with some stocks moving into export channels at that figure.

Diesel Oil

Leading refiners continue to hold the market at $2 per barrel in bulk at refinery terminals, but a better undertone is in evidence, in line with more strength in bunker "C." There is considerable interest shown in the possibility of an advance in bunker "C" and its probable effect on the Diesel oil basis.

Diesel oil prices did not move downward in sympathy with bunker "C" during the sharp price break which carried the market for the latter oil from $1.75 to $1.05 a year and a half ago, and there is some question in the minds of the trade as to whether any markup in the bunker "C" basis would be immediately reflected by an increase on Diesel oil.

Marine interests, it is recalled, protested the maintenance of a $2 market on Diesel oil at the time of the big drop in bunker "C" and it is expected that similar action on the part of consumers would develop in the event that the Diesel oil quotation were to follow any upward movement in lower grades of fuel oil.

Consumption of Diesel oil is running at satisfactory levels, and is fully up to refiners' expectations. As a matter of fact, Diesel oil sales are reaching new high levels from month to month, although the favorable position with relation to this oil is generally lost sight of in the more general interest in gasoline, fuel oil, and other refined products. As a matter of fact, Diesel oil now presents one of the brightest spots in the refined products picture in the East Coast area, with practically all developments respecting this oil constructive in character.

Export Markets

Export gasoline operators are apparently marking time, pending further developments in the price situation. It is believed that the series of conferences now under way in Europe between a group of American oil company executives on one hand, and leaders of the European industry on the other, has contributed in some measure to the current lack of buying. No cargo sales are reported in the Gulf this week, although one inquiry for 10,000 tons of 400 endpoint gasoline for shipment to the United Kingdom is reported, with no shipping time specified. A rumor current in export circles here has it that a second cargo of 10,000 tons of 400 endpoint was sold out of the Gulf about 10 days ago on a c.i.f. British port basis, with the netback figuring under the established price level. Foreign operators, it is reported, are unwilling to pay the export association basis, in view of the weak domestic market, but at the same time are unwilling to go into the field and attempt to fill out a cargo by purchases in the open market.

Kerosene is moving in but moderate quantities to the export trade, and generally in small parcels. No cargo business is reported this week. The cased product is reported showing a firm tone, and meeting with a fairly active demand.

Foreign buyers have apparently covered on their cylinder oil requirements for prompt and nearby shipment, and there was very little inquiry in the market this week. Buyers' ideas as to price are materially under refiners' views, and a trading level has not yet been established.

Paraffin wax inquiry for shipment abroad has eased off a little this week. Here is another case where export buyers are bidding materially under the open market, with sellers unwilling to meet the low bids.

Export activity in other lines of refined products continues of but little importance at the moment.

(Continued on Page 141)

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Natural Gasoline Manufacture

WELL TRAINED FIELD MAN AID TO PLANT OPERATION

By F. J. Linquist
Columbian Gasoline Corp.*

The field man should primariiy be familiar with the volumes and contents of the gases being purchased or processed in the plant. In order to have this knowledge, it is necessary to have tests made once a week or at least at bi-monthly intervals, so as to have a check as to whether or not the purchaser (by whom he is employed) is getting a return in line with the settlement tests on which royalties are paid. With such information he should be able to adjust conditions so that the plant will be handling the greater percentage of gases having the better contents.

In order to do this, he should necessarily be familiar with the working parts of the orifice meter, the capacities of the same, and also the gathering system leading from the well. The condition is sometimes found, that with the installation of a larger orifice plate, a greater passage of gas is effected, but if the line has inadequate carrying capacity, the fault lies with the engineer or parties who sanctioned the building of such a system. It should be stated that systems of too small diameters are often built in production areas, but such conditions are often the reverse. In other words, the field man should have enough information to determine the size lines to be built to certain producing areas.

Problems often arise with reference to the method of tie-ins to separation systems; the amount of pressure being maintained on the separators; volumes of gas being purchased; and returns to leases of residue gases for fuel purposes. With the use of well chosen words, it is possible at times to foster a permanent friendship between producer and gasoline manufacturer, so that during the life of a contract, many discussions and controversies will be avoided. Thus, he acts as a means of giving his company a good reputation in a field, and makes it a less difficult proposition for the contract man to sign up more gas and to obtain helpful concessions.

Knowledge of Instruments

The field man should have intimate knowledge of the various working parts of any instrument used in determining the specific gravity and content of a gas, and should possess a certain finesse in handling such. It is not to be construed that such capability should reach a degree where the producer receives an unfair test, rather, the purpose is to assure the manufacturer that he is getting settlement on a 50-50 basis. Overzealousness in an employe to the point where unfair methods are used, should not be tolerated and the field man, usually, has to watch his understudies for such traits, and to rectify anything that happens while one of his men is in such a frame of mind.

In addition to the foregoing duties, a man in charge of field operations should keep an observant eye on territory surrounding the area from which the gas is being purchased, in so far as it concerns future development, extensions of gathering systems, etc. He should also be familiar to a certain degree with other gasoline manufacturers' ideas in handling their gas systems, plants and products, so that in event of similar problem arising in his own organization, he may better compete with same.

There is a similarity between a field man and a mess sergeant in the army. In order for the soldiers to move, they must have an abundance of good rations;

(Continued on Page 147)

*Plant Foremen's Meeting.

THREE STATES HAVE BULK OF GAIN IN NATURAL GASOLINE PRODUCTION

Four states—Oklahoma, Kansas, Texas and California—are responsible for practically all of the increased output of natural gasoline for the first six months of this year over the same period last year. Kansas is included in the list of four for the reason that last year the Oklahoma and Kansas figures on natural gasoline plant operations were combined in the monthly reports of the Bureau of Mines. Kansas production this year and last has shown very little change so the three states instead of four are actually responsible for the enlarged output of natural gasoline.

As shown in the accompanying table the natural gasoline production for the first six months of this year was 298,300 000 gallons or 34.9 per cent greater than the same period last year. For these same periods Oklahoma (including Kansas) production increased 45.9 per cent, California 45 per cent and Texas 22.7 per cent. Increases in other areas were of relatively little importance with a decrease in Indiana and Illinois.

For the increase of 298,300,000 gallons, Oklahoma (including Kansas) accounts for 48 per cent, California 38.8 per cent and Texas 12.1 per cent. Oklahoma output showed a large increase the first three months of this year over the same period last year. Since that time the output has shown little change. California production mounted rapidly in April, May and June and its production is now greater than that of Oklahoma.

Most of the Oklahoma increase came from the Greater Seminole section with minor increases in the Logan County area. California's increase, which has not yet reached its peak, came from the deep sand development in the Los Angeles basin. The increase in the Santa Fe Springs area has been especially noteworthy. Texas increases have been scattered with new plants in the Panhandle and one large plant in West Texas.

Natural gasoline stocks on June 30 for the country as a whole were 109 per cent greater than on the same date last year. Practically all of this increase was accounted for in Oklahoma (including Kansas) and Texas. Oklahoma and Kansas manufacturers increased their storage approximately 100 per cent and Texas 300 per cent. Natural gasoline stocks were exceptionally low a year ago so the present stocks represent an average condition based on days' supply.

California manufacturers, while they have greatly increased their output of natural gasoline, have shown very little change in stocks. The California output is absorbed by the refiners with practically no field storage, a part of the production moving directly to the refineries by pipe line connecting to the gasoline plants.

NATURAL GASOLINE PLANT OPERATIONS IN UNITED STATES (Thousands of Gallons)

	Production first six months			Stocks June 30		
	1929	1928	Increase	1929	1928	Increase
Appalachian	54,100	53,900	200	3,981	3,120	861
Indiana, Illinois, etc.	7,100	7,500	*400	474	307	167
Oklahoma, Kansas, etc.	455,600	312,200	143,400	26,983	13,429	13,554
Texas	194,900	158,900	36,000	22,403	7,328	15,075
Louisiana and Arkansas	45,300	43,300	2,000	1,084	1,150	*66
Rocky Mountains	22,600	22,000	600	568	522	46
California	371,800	256,100	115,700	1,470	1,346	124
Total	1,151,400	853,900	298,300	56,963	27,202	29,769

*Decrease.

A PRACTICAL SUGGESTION

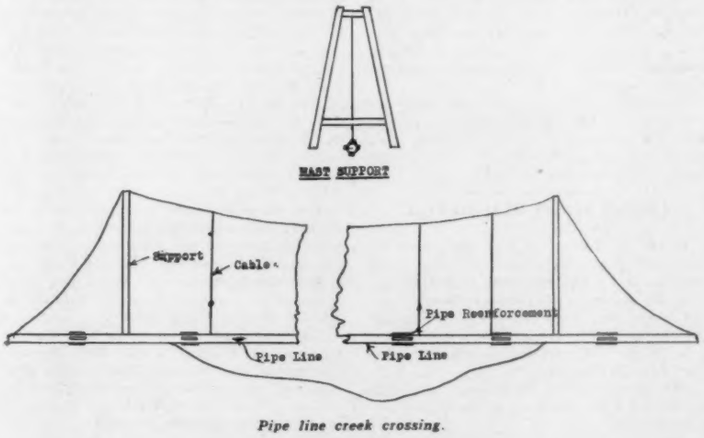
PIPE LINE CREEK CROSSINGS

There are two methods of making a creek crossing with pipe line, one to follow the topography of the creek bed and bank or the other to hang the pipe overhead. With the crossings made through creek bed, the pipe must be fire bent and each joint of pipe should be weighed down with a heavy collar known as a river clamp. River dogs and hooks are also used for anchoring. Any slack in the line is thrown upstream. Where water contains highly corrosive and injurious chemicals, the pipe should be enclosed in a concrete incasement.

Wherever possible the overhead lines are more quickly and cheaply installed. The cost of salvaging is less also. The installation described here consists in stringing a cable over two A masts located on each bank of the stream and tying down the ends of the cable to dead men. The pipe line is held to this suspended cable by wire lines rigidly tied by cable fasteners.

The pipe is welded and each joint is further re-enforced by four strips of iron welded longitudinally and equidistantly around the weld. For 4-inch pipe these bars can be one-half inch by one-half inch by 12-inch.

Practical suggestions by those connected with the construction and operation of natural gasoline plants are invited. Payment will be made as soon as suggestions are accepted. Address all communications to the Natural Gasoline Department, The Oil and Gas Journal, Tulsa.



Pipe line creek crossing.

REFINERY BLENDING OF NATURAL GASOLINE GAINS

Refinery utilization of natural gasoline has increased rapidly so far this year. For the first six months of this year based on Bureau of Mines reports, the quantity of natural gasoline blended at refineries in United States totaled 20,812 000 bbls. This was an increase of 3 920,000 bbls., or 23.2 per cent, over the same period last year. This accounts for approximately 65 per cent of the total natural gasoline production in United States, the remainder going direct to bulk stations where it is blended. A relatively small quantity is sold as finished motor fuel.

Government reports estimate the total motor fuel production in United States for June at 1 511.000,000 gallons. Of this quantity 1,495 500 000 gallons came from refineries including the California natural gasoline blended at refineries. The remainder was benzol and natural gasoline.

ENLARGE LARGE PLANT

SHREVEPORT, La., Aug. 9.—The Palmer Corp. has awarded a contract for an addition to its Alto gasoline plant in the Richland Parish gas field which will double the gas capacity. Construction of the addition, which will make the plant one of the largest absorption gasoline plants in the country, will begin on or before September 1. Capacity of the present plant, completed in June, is 100,000,000 feet of gas per day and it is running approximately 75,000,000 feet, recovering an average of 3 gallons per 1,000 feet of gas.

NEW CARBON BLACK PLANT

A privately owned carbon black plant is in prospect for the Panhandle area of Texas to take care of the residue gas from the plant which the F. C. Henderson Co. is constructing on the Marland lease adjacent to Sanford. Judge F. C. Spencer of Borger, Tex., is to head a company which will build the plant. It is expected that the plant will cost $200,000. Application with the State for the construction of the plant has not been made.

The Henderson plant of the oil absorption type will be completed early in September. It will have a capacity of 25,000,000 cubic feet of gas. The gas has a low gasoline content.

Brief Items for Petroleum Refiners

Sales Organization Of New Continental Company Announced

A new sales organization with division headquarters ranging from New York City to Butte, Mont., was announced

E. S. Karstedt

Vice president of the Continental Oil Co. who will continue to head sales department.

in Denver this week by Edwin S. Karstedt, vice president in charge of sales for the Continental Oil Co. The personnel of the reorganization was drawn from the sales staffs of the Marland Refining Co. and the Continental Oil Co., which recently were merged into the greater Continental Oil Co.

Operating under Mr. Karstedt are J. M. Hollister, assistant vice president in charge of real estate, titles, leases, contracts, etc., and Lawrence R. Milne, general sales manager. Both occupied similar positions under the old Continental company. Mr. Milne's assistants are O. B. Lloyd, formerly assistant sales manager for the Marland company at Ponca City, and L. T. Cramer, who has held the same position with Continental. Staff assistants to Mr. Milne include C. C. Warner, advertising, and B. E. Sibley, chief technologist.

Four Districts

The sales territory is divided into four major districts. Harry J. Kennedy, formerly sales manager of the Marland company, who has been in charge of that company's eastern territory for several months, will remain as sales manager in charge of the New York office. His territory includes New England and the Atlantic seaboard. Three Continental district managers—J. S. Curtis, J. T. Strong and J. P. Anthony—will have charge of the other three headquarters at Ponca

(Continued on Page 141)

ENLARGE ELDORADO PLANT

The Eldorado Refining Co. is completing an enlargement and improvement program at its Eldorado, Kans., refinery involving an expenditure of $250,000. New still equipment is being installed and a continuous treating system is nearing completion. Changes are being made to provide for electrical pumping. A 20-acre tract of land adjoining the plant site has been purchased. Two 55,000-bbl. tanks and three 25,000-bbl. tanks are to be erected.

APPOINT COMMITTEES FOR FOUR STATE CONVENTION

KANSAS CITY, Mo., Aug. 9.—In preparation for the annual Four State Jobber meeting which will be held here October 15, 16 and 17, four committees have been appointed to have charge of the various phases of convention activities.

At the meeting held this week it was predicted that the attendance this year would exceed that of last year when 725 oil men registered. Most of the registrants were oil jobbers from Iowa, Nebraska, Missouri and Kansas, the four States included in the convention. The convention will be held at the Hotel President.

Following is the personnel of the four committees:

Finance Committee: J. W. Wilson, J. C. Nourse, William Knapp, R. A. Ostertag, R. D. Mering, John Rader, William Atkins, and Homer Smith.

Ladies' Entertainment Committee: J. R. Battenfeld, J. A. Cannon, and Lane Dunagin.

Publicity Committee: A. J. Daniel and Roy Spear.

Entertainment Committee: Jim McIlvain, Norman LeBlond, J. E. Wyatt, C. R. Houston, and William Knapp.

COMPLETE WADHAMS AND BARTLES-MAGUIRE DEAL

CHICAGO, Aug. 10.—The consolidation of the Wadhams Oil Co., and the Bartles-Maguire Oil Co., both with headquarters in Milwaukee has been accomplished and for the present each company will continue to operate as in the past under its own name and following its former methods and policies. Henry Stolz is in charge of operations of the Bartles-Maguire Oil Co. and H. W. Dodge is in charge of operations of the Wadhams Oil Co., with A. G. Maguire acting as president of both companies. This temporary arrangement is expected to continue until about October 1, at which time the financial details of the new company will be completed and the organization perfected.

Regarding the possibility of tanker shipments from the refinery at East Chicago, Ind., to Milwaukee, it is stated that the ordinances regulating the delivery and shipment of gasoline in Milwaukee have stood in the way of such deliveries. It is possible that the obstacles may be overcome and tanker shipments be started. In the meantime shipments will be by tank car.

THREE HURT IN FIRE

P. D. Mahoney, superintendent; Tom Word and Jack Deisher were injured in a fire at the small skimming plant of the Bi-State Refining Co., located at Burkburnett, Tex. The fire followed an explosion and resulted in a property damage of $5,000. None of the employes was seriously injured.

The plant in the past has been operated by the Crystal Refining Co. It was recently taken over by the Bi-State company and preparations are now being made to resume operations.

LOCKE WITH OLD DUTCH

David A. Locke, of the pipe line department of the Natural Gas Corp., at El Dorado, Ark., has resigned. Effective August 15, he becomes general superintendent of the pipe lines of the Old Dutch Refining Co., with headquarters at Muskegon, Mich. The company is building a refinery at Muskegon.

Mr. Locke is the eldest son of George D. Locke, vice president of Barnsdall Refineries, Inc.

CREDIT MEN TO MEET IN TULSA OCTOBER 4 AND 5

W. A. Ryan, credit manager of the Mid-Continent Petroleum Corp., who is chairman of the board of governors of the petroleum refiners division of the National Association of Credit Men, has announced that the 1929 annual conference of refinery credit managers will be held at the Mayo Hotel, Tulsa, Okla., on Thursday and Friday, October 3 and 4.

The dates and place of the meeting have been selected in order that refinery credit executives from all parts of the country who annually attend these conferences may also have the opportunity of attending the International Petroleum Exposition which will open in Tulsa on Saturday, October 5.

The program for the conference, now partially completed and to be announced later, provides for a full two-day meeting, during which time numerous business subjects closely related to credit problems will be discussed. Special consideration will be given to a study of how credit executives can improve the position of customers; an analysis of the effect the speeding up of deliveries by railway carriers is having on credit terms and policies; proper co-ordination of credit and sales department activities; etc. A number of representative speakers have signified their willingness to take part in this program which it is felt will be not only constructive and educational but also extremely interesting throughout.

Other members of the board of governors of the Petroleum Refiners division of the National Association of Credit Men, in addition to Mr. Ryan, chairman, are E. C. Claiborne, Derby Oil Co., Wichita, Kans.; K. R. Hankinson, Tidewater Oil Co., New York. N. Y.; E. F. Harrell, Deepwater Oil Refiners, Inc., Houston, Tex.; R. E. Holcomb, Skelly Oil Co., Tulsa, Okla.; F. R. Seleine, Shaffer Oil & Refining Co., Chicago, Ill.; H. R. Wakefield, Sun Oil Co., Philadelphia, Pa.; and R. A. Colliton, director, Credit Interchange Bureaus, National Association of Credit Men, who is secretary-treasurer of the refiners' organization.

TO BUILD COMPOUNDING PLANT AT KANSAS CITY

The Atlantic-Pacific & Gulf Oil Co., of Kansas City, Mo., has completed plans for the construction of a compounding plant at Kansas City, Mo., the general headquarters of the company. A bulk plant for gasoline and other refined products including fuel oil is now under construction.

The Atlantic-Pacific & Gulf Oil Co. was recently organized and has taken over as subsidiaries, Orient Petroleum Co. of Wichita Falls, Tex., the Orient Petroleum Co. of Illinois, with headquarters at Elgin, and the Pennsylvania Consumers Oil Co. of Council Bluffs, Iowa. The president of the company is J. P. Howe, an official of the Manhattan Oil Co., at the time it was absorbed by the Independent Oil & Gas Co. last year. Mr. Howe has been active in marketing operations for several years and is well known in the Middle West.

The company plans to expand both its refining and marketing activities. A large cracking unit of the Jenkins type is being installed at the Wichita Falls refinery which for several years has been operated as a skimming plant. Additional storage is also being built.

The company at present has service stations at Wichita Falls, Des Moines, Davenport, and Council Bluffs, with several units in western Nebraska. These facilities are to be expanded in line with the increased refinery capacity.

MANY IMPROVEMENTS AT PENNZOIL PLANTS

OIL CITY, Pa., Aug. 9.—Many improvements and additions to equipment are now under way at the two Rouseville plants of the Pennzoil Co. which when completed will make the motor oil output of the large local concern considerably greater than it is now. Most of the expansion program was made necessary by the continued increase in the demand for Pennzoil.

Among the additions which are being made to the plant are an additional water works which is now pumping 4,800 gallons a minute through the plant. The water for this purpose is taken direct from Oil Creek and is returned there after it has circulated through various machinery at the plant. The new pumping plant is in addition to one which has a capacity of 3,600 gallons a minute and also a gravity line which carries 12,000 gallons a minute from the Cherry Run district.

At the top of one of the large hills which surround Rouseville and its main plant, the Pennzoil maintains a 7,000-bbl. tank constantly filled with water which is available as a fire fighting supply.

All of the Sharples supercentrifuge machines at the Pennzoil plant have been replaced with a new model machine and new chilling equipment has been added to increase the capacity of the plant.

A new Hershoff burner is being installed for the restoring of fuller's earth used at the plant, making a total of four burners now employed. A new filter press unit is nearing completion and will be in use within 10 days. It consists of four 48-inch 325-plate Bethlehem filter presses.

At plant No. 2, a 400-horsepower boiler equipped with underfeed choker will be in operation for the first time this week. The company is also installing there a new tower equipment and heat exchange on a gasoline rerun unit which will practically double the present capacity. This being installed for the purpose of increasing the output of gasoline.

The cafeteria which is operated at the Rouseville plant was recently transferred from the building which formerly housed it to the second floor of the plant office structure. This has made possible the entire use of the other buildings for laboratory purposes and the equipment for that purpose is being entirely remodeled. New dynamometer equipment is being installed for the testing of motor oils and gasoline.

MEXICAN IMPORT TAX

NEW YORK, Aug. 12.—The tariff commission of the Mexican Ministry of Finance has under consideration import duty of 20 centavos per 100 kilos, approximately 15 cents a barrel on fuel oil imports from the United States. The duty supposedly is to protect Mexican coal fields in Coahuila. Mexican West Coast using United States fuel oil which can be laid down cheaper than Tampico oil because of freight differentials. Proposed duty will replace existing consular invoice amounting to 4½ cents per barrel.

JOSEPH BARTLES DEAD

CHICAGO, Aug. 10.—Joseph Bartles, founder of the Joseph Bartles Oil Co., whose name is part of a number of well-known oil companies as the Bartles-Scott Co., of Winona, Minn., the Bartles-Maguire Oil Co., of Milwaukee, and others, died last week at his home at Santa Monica, Calif., where he had resided for many years. He had passed his eightieth birthday.

GASOLINE MARKETS ARE SOFTENING IN THE EAST

(Continued from Page 137)

Petroleum Exports

The following table shows principal exports of refined petroleum products from New York during the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	Aug. 3	July 27	July 20
Gasoline	594,500	739,600	635,000
Naphtha	2,279,400	1,314,100	918,300
Kerosene	107,200	414,300	910,000
Fuel oil	120,000	129,000	26,000
Lub. oil	1,094,700	1,907,400	2,119,600
Petroleum, Refined	1,053,300	2,877,000	2,590,100
	Pounds		
Petrolatum	.....	.....	.....
Paraffin wax	1,033,100	1,546,300	1,713,400
Refined	22,500	83,800	.....
Scale	181,000	215,000	84,000
Lub. grease	757,900	1,270,200	1,590,800

A cargo of 1,350,000 gallons of deodorized naphthas was shipped out on the Black Sea during the week for Rouen.

Imports

Imports of crude and refined oils at the principal United States ports for the week ended August 3 totaled 1,745,000 bbls., a daily average of 249,286 bbls., compared with 2,149,000 bbls., a daily average of 215,428 bbls. for the previous week. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast ports—	
Baltimore	248,000
Boston	99,000
New York	1,086,000
Philadelphia	156,000
Others	68,000
Total	1,657,000
Daily average	236,714
At Gulf Coast ports—	
Galveston district	65,000
Tampa	23,000
Total	88,000
Daily average	12,572
At all United States ports—	
Total	1,745,000
Daily average	249,286

California Oil Receipts

Receipts of California crude and refined oils at Atlantic Coast ports for the week ended August 3 totaled 900,000 bbls., a daily average of 128,571 bbls., against 457,000 bbls., a daily average of 65,285 bbls. for the previous week. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast ports—	
Baltimore	170,000
Boston	79,000
New York	394,000
Philadelphia	257,000
Total	900,000
Daily average	128,571

Distribution of total California oil receipts is as follows:

Crude	79,000
Gasoline	821,000

Large quantities of Pacific Coast motor fuel are under contract for delivery to Boston and Philadelphia during the past several weeks and continued heavy movement of California gasoline is looked for. The current movement is all on contract, no "spot" cargoes having been reported for some time past.

Gas Oil

Developments in this division of the market have been lacking in general interest this week. Refiners continue to quote recycled stock at 5¼ cents per gallon in tank car lots at refineries, with some sellers going a quarter to a half cent under this figure. Spot trade is rather light.

Contract withdrawals by the large gas companies are seasonably dull at this time, with the trade looking for continued quiet in this branch until about the middle of September, when demand normally starts to quicken.

VACUUM DISTILLATION OF LUB OILS FAVORED

(Continued from Page 133)

as the coloring matter is removed. In effect then the removal of coloring matter during the distillation process renders the wax in a form more easily removable. Some contend, there is a sufficient removal of coloring matter during the vacuum distillation to allow chilling and centrifuging of the oil without treatment.

While these and similar theories regarding the solvent action of the coloring matter on the wax serve to guide the processing of the stocks it is generally conceded that much work remains to be done before the full benefits of vacuum distillation may be realized. With the entire problem being given so much attention at present, there will no doubt be some additional interesting developments.

GASOLINE MARKET IN CHICAGO MORE ACTIVE

(Continued from Page 136)

unsatisfactory. There is a steady movement on contracts but the buyers in the spot market are indifferent. It may be largely the vacation spirit but they seem most unwilling to come to a decision to buy any considerable quantity of gas oil. For straight run gas oil the refiners are not quoting in many cases, in others they are asking a little advance. The offerings are light which seems to indicate higher costs in the early future but it is difficult to sell to the average gas company buyer. Many of them state when approached that they are not interested, having arranged for their supply of material but salesmen who sell this trade state that these arrangements have been made very quietly and that they have been surprised to learn of them. The present demand is diminished by this situation but many believe a little later there will be an improvement, not only because of the increased consumption of gas due to the colder weather and longer nights but also because some of these buyers will find they really need some oil. In the larger cities and in the smaller ones, to a considerable extent, the chief use for artificial gas is for heating or for cooking. The local gas company has for years been working on plans to supply gas for both heating and industrial uses. For years they have advertised the slogan, "you can do it better with gas." Now they plan to add to this statement that this improved service can be had at no greater cost, all things considered that enter into the cost of heating a home with coal. There is no doubt of the efficiency of gas heating but the factor against it has been the great expense involved in its use. The method which is being put into use is the transportation of natural gas for long distances to this city.

The demand for zero gas oils is still very quiet. Occasional sales for some special purpose or even less frequent sales to some distributor who can be induced, usually by a low price, to take in a number of cars, make up the demand. There is a general feeling that the supply of desirable furnace oil of this type will not be in excess of the demand and this is particularly true of the 28-30 grade of fuel oil which is at present very hard to buy with a zero cold test. Prices are very firm and some are quoting slightly higher rates.

The demand for the lighter grades of fuel oil is light at present although some distributors are taking in their first deliveries on contracts. There is very little oil of this grade being offered. The heavy industrial fuel oils show no change. In this connection ideas as to what is a heavy industrial fuel oil are being changed and some dealers and buyers include in this group oils with a gravity of from 8 to 14 degrees while the 24-26 gravity which was formerly a heavy oil is now classed as light by many. Here again the situation is found of a good movement on contracts and quite an active demand for contracts with a slow spot market. The kind of contract wanted is a contract for a period of six months to a year at a flat price not higher than the present market. Some buyers claim they have been able to make contracts extending over the wanted period at about the present market price. There are quite a number of new sources of supply from new plants and even recently established fields so as some say, anything is possible. There are some stocks of very high viscosity fuel oils which are made usable by blending with residual oil from cracking plants and these are being contracted for by some of the large steel plants equipped to use them. Prices are steady though in a general way the offerings are larger. One large system of refineries which has been a chief source of supply in this district and has a very large volume of fuel oil to sell has been withdrawn from the market here on all grades from 24-26 gravity downward. Not even small orders can be taken until further notice. Some believe this organization is merely planning to let the other refiners supply the present demand and then come on the market and try for higher prices than rule right now. One Mid-Continent refiner has instructed its local office to advance the price of its 18-22 fuel oil from 50-52½ cents to 57½ cents, claiming the refiner has made large sales and is practically out of the market. The general statement regarding the heavy industrial fuel oil business is that prices are firmly held by refiners and sales are slow and hard to close, a condition due in part to the vacation season when nearly every buyer is either away on his vacation or going or just returned and if none of these he is doing the work of some one who is away and has too much to do except talk about it.

Bright Stocks Strong

Bright stocks are very strong. It has developed during the past week or two that many buyers who purchased freely on contracts made at the beginning of the season find the demand is far greater than they anticipated. Some of the largest users of bright stocks have already taken in their entire season's purchases and have five months for which they are now seeking to make provisions. The usual quotation is 36 cents for Mid-Continent bright stock but almost invariably the quotation is merely nominal as the refiner quoting has no bright stocks to sell and is sold ahead, some of them to the end of 1929. There is what may prove to be an acute shortage even if it is not at that point now. One sale was made by one compounder to another at 39½ cents and it is quite commonly said that before the end of the year Mid-Continent bright stocks would sell at 40 cents. One large refiner states he has traced the reason for this situation in bright stocks and finds it due almost wholly to the Ford cars. Some figures were given earlier in the season showing the vast increase in the consumption of bright stocks that must result from the advent and very wide use of the new model which requires an oil containing at least 50 per cent bright stocks while the old model would run satisfactorily on an oil that did not contain any bright stocks. The Ford nonchatter oil is a thing of the past. Steam refined oils are firm and neutrals doing a little better some state. The business done in motor oils is very large. Industrial oils are also selling freely.

July Consumption Record

There is no change in the consumption of gasoline and motor oils. The largest distributors in this territory state their gallonage during July broke all records and that their sales showed an increase of better than 15 per cent over last year. Smaller distributors are doing a good business and report consistent increases in gallonage. In the less populous districts there is considerable price cutting and particularly along the highways outside of the larger communities where the roadside stations are seeking to induce the tourist to fill his tank before entering the cities. There is a bad situation in Milwaukee and this city is by no means devoid of price cutters but as a rule these are also away from the most traveled districts. So far the major companies have elected to ignore these price cutters which may reap a small harvest for the time being but which do not draw sufficient business to justify more than local competition, if that. So far as any one can determine there will be no general tank wagon change in this territory while the demand for gasoline is as large or anywhere nearly as large as at present. Jobbers report they are not making many contracts at present preferring to wait a while before signing up for another year. Some of them fear they will render themselves liable under the code of ethics to some restriction of their right to carry on their business as they have been doing if they sign a contract. It will take some time and trouble to make the average oil man realize the benefit that will come from such a code but it is worth it.

ANNOUNCEMENT OF NEW SALES ORGANIZATION

(Continued from Page 140)

City, Denver and Salt Lake City, respectively.

Division managers reporting to the district chiefs named above have been appointed as follows: F. E. Miller, New York; W. A. Stokely, Richmond; A. W. Horton, Ponca City; E. G. Roell, Kansas City; T. H. Lawson, Wichita Falls; R. N. Mullin, Chicago; R. R. Risser, Minneapolis; J. E. Hannum, Denver; J. J. Foley, Albuquerque; J. A. Lentz, Lincoln; J. E. Hult, Salt Lake; E. F. Battson, Butte, and C. W. Landsrud, Great Falls.

George J. Woods, formerly manager of the Marland Kansas City district, has been transferred to New York as assistant to Mr. Kennedy. I. F. Keeping, Continental's Pueblo division manager, has been transferred to Denver as assistant to J. E. Hannum and his headquarters consolidated with the Denver office. The Spokane division likewise has been consolidated with the Butte division. R. N. Mullin, formerly on the sales staff at general sales headquarters at Denver, succeeds J. F. Ryan at Chicago, who now is assistant to Mr. Mullin.

RUSH PLANT CONSTRUCTION

MUSKEGON, Mich., Aug. 10.—With the arrival of additional equipment it is now expected that the small skimming plant of the Muskegon Refineries, Inc. will be ready for operation by September 1. The distillation equipment will consist of two shell stills. W. L. Merchant, formerly connected with the refinery operations of the Beacon Oil Co., has charge of construction and will operate the plant when completed.

The Old Dutch Refining Co. which is building a 3,000-bbl. refinery here will complete an 8-mile pipe line connecting the field to the plant this week. Two 37,000-bbl. storage tanks have been completed and the company will start running crude to storage as soon as the line is completed.

EXPLOSION KILLS TWO

NEW YORK, Aug. 10.—Two men were killed and seven others seriously injured when an explosion aboard the Standard Oil Co. of New Jersey tanker William Rockefeller partially wrecked the vessel. Explosion and fire are believed to have been caused by a spark which ignited gas fumes while the ship was discharging crude at the Bayonne refinery. The William Rockefeller arrived here August 8 with a cargo of 125,000 bbls. of crude from Baton Rouge.

PLANT READY FOR CRUDE

CHICAGO, Aug. 10.—Work on the storage tanks of the Empire Oil & Refining Co. at East Chicago is progressing very rapidly and it is expected that storage will be ready for the delivery of crude by the end of this month. Rapid work has been done on the Texas-Empire pipe line and the present plan is that crude may be run by September 1.

ARRINGTON TO ST. LOUIS

J. R. Arrington, who has been in charge of the Tulsa sales office of the Pierce Petroleum Corp., has been transferred to the St. Louis headquarters of the corporation. Mr. Arrington will continue to have charge of refined oil purchases and sales for the corporation and in addition will do some special marketing work.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

	Aug. 13		Aug. 6		July 30	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.07½	.07¾	.07¼	.07¾	.07½	.08
56-58 450 endpoint	.07	.07¼	.07	.07¼	.07¼	.07½
*58-60 437 endpoint (U. S. Motor)	.0753		.0735		.0798	
*60-62 437 endpoint	†.07¼	.07½	.0769		.0769	
*60-62 400 endpoint	.08		.0804		.08	
*64-66 375 endpoint	.0825		†.07¾	.08	.0875	
68-70 360 endpoint	.08¼	.08½	.07¾	.08	.08	.08½
64-66 437 endpoint (blend)	.07	.07¼	.07	.07¼	.07½	.07¾

*Weighted average prices August 12, 5 and July 29 as reported by representative refiners. Sales to jobbers only. †No sales reported to jobbers. Price shows general market.

NORTH TEXAS—						
56-58 450 endpoint	.07	.07¼	.07	.07¼	.07¼	.07½
58-60 460 endpoint	.07	.07¼	.07	.07⅛	.07¼	.07¼
58-60 437 endpoint (U. S. Motor)	.07⅛	.07⅜	.07	.07¼	.07¼	.07½
60-62 400 endpoint	.07¼	.07⅜	.07¼		.07½	.07¾
64-66 390 endpoint	.07½	.07⅝	.07½	.07⅝	.07¾	.08
64-66 375 endpoint	.07¾		.07⅜	.07¾	.08	.08¼
68-70 360 endpoint	.08	.08¼	.07¾	.08	.08	.08¼
64-66 437 endpoint (blend)	.07	.07¼	.07¼	.07½	.07½	.07⅜
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.08¼	.08½	.08	.08¼	.08¼	.08½
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.08¼	.08½	.08	.08¼	.08¼	.08½
PENNSYLVANIA—						
52-54 Naphtha	.09	.09½	.09	.09½	.09	.09½
54-56 Naphtha	.08⅛	.08¾	.08⅛	.08¾	.09½	.09¾
58-60 Gasoline	.09	.09¼	.09¼	.09½	.09¾	.10
60 Gasoline	.09¼	.09½	.09½	.09¾	10	.10¼
62 Gasoline	.09¾	.10	.09¾	.10	.10¼	.10½
64 Gasoline	.10½		.10½		.10½	
68-70 350 endpoint gasoline	.11		.12	.12½	.12	.12½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic.	.09	.10	.09	.10	.09	.10
CHICAGO DISTRICT (Based on Group) 3—						
50-52 450 endpoint (Naphtha)	.07¼	.07½	.07¼	.07¾	.07½	.08
56-58 450 endpoint	.07¼		.07¼		.07¼	.07½
58-60 437 endpoint (U. S. Motor)	.07¼	.07½	.07	.07¼	.07¼	.08
60-62 400 endpoint	.07⅝	.07⅞	.07½	.07⅝	.07¾	.08¼
64-66 375 endpoint	.08	.08¼	.07⅞	.08	.08	.08½
68-70 360 endpoint	.08⅛	.08⅜	.08¼	.08¾	.08¼	.08¾
64-66 437 endpoint (blend)	.07⅜	.07⅝	.07⅞	.07⅜	.07½	.08
GULF COAST (Export)—						
58-60 (U. S. Motor)	.08½		.08½		.08½	
60-62 400 endpoint	.09½		.09½		.09½	
61-63 390 endpoint	.09¾		.09¾		.09¾	
64-66 375 endpoint	.10		.10		.10	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

NATURAL GASOLINE

	Aug. 13		Aug. 6		July 30	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06⅜	.06½	.06¼		.06¼	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¼	.06½	.06⅜	.06¼	.06¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.05⅞	.06	.05½	.05¾	.05¾	.05⅞
Grade BB, 84-92, 375 e.p., rec. 85%	.05⅞	.06	.05½	.05¾	.05¾	.05⅞
Grade C, 80-90, 375 e.p., rec. 78%	.05⅞	.06	.05½	.05¾	.05¾	.05⅞
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06⅜	.06½	.06¼		.06¼	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¼	.06½	.06¼	.06¼	.06¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.05⅞	.06	.05½	.05¾	.05¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.05⅞	.06	.05½	.05¾	.05¾	
Grade C, 80-90, 375 e.p., rec. 78%	.05⅞	.06	.05½	.05¾	.05¾	
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.06¾		.06½		.06½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06¼	.06⅜	.06	.06¼	.06	.06¼
Grade C, 80-90, 375 e.p., rec. 78%	.06¼	.06¾	.06	.06¼	.06	.06¼
CALIFORNIA—						
75-78 375-390 endpoint	.08¾	.09¼	.08¾	.09¼	.08¾	.09¼
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06¼	.06⅜	.06⅛	.06¼	.06¼	.06½
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¼	.06⅜	.06⅛	.06¼	.06¼	.06½
Grade B, 76-83.9, 375 e.p., rec. 85%	.05¾	.06	.05¾		.05¾	.06
Grade BB, 84-92, 375 e.p., rec. 85%	.05¾	.06	.05¾		.05¾	06
Grade C, 80-90, 375 e.p., rec. 78%	.05¾	.06	.05¾		.05¾	

BURNING OIL

	Aug. 13		Aug. 6		July 30	
OKLAHOMA (Group 3)—						
41-43 water white kerosene	.05⅛	.05½	.05⅛	.05½	.05⅛	.05½
42-44 water white kerosene	.05¾	.06	.05⅝	.05¾	.05¾	.06
***NORTH LOUISIANA—**						
41-43 water white kerosene	.05¾		.05½		.05½	.05¾
NORTH TEXAS—						
41-43 water white kerosene	.05	.05⅛	.05	.05⅛	.04⅞	.05⅛
40-42 water white kerosene	.04¾	.05	.04¾	.05	.04¾	.05
***ARKANSAS—**						
41-43 water white kerosene	.05¾		.05½		.05½	.05¾
PENNSYLVANIA—						
43 Kerosene prime white	.05¾	.06	.05¾	.06	.06	.06⅛
45 Kerosene water white	.06	.06⅛	.06	.06⅛	.06⅛	.06¼
46 Kerosene water white	.06¼	.06½	.06¼	.06½	.06½	.06¾
47 Kerosene water white	.06½	.06¾	.06½	.06¾	.06¾	.07
300 Mineral Seal	.06¾	.07	.06¾	.07	.06¾	.07
CALIFORNIA—						
38-40 water white Kero. (high-burning test)	.05½	.06	.05½	.06	.05½	.06
Engine distillate, 43-44, 445 endpoint	.08	.08¾	.08	.08¾	.08	.08¾
Engine distillate, 42-44, 480 endpoint	.07½	.08¼	.07½	.08¼	.07½	.08¼
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.05¼	.05½	.05⅛	.05⅜	.05⅛	.05½
42-44 water white kerosene	.05½	.05¾	.05½	.05¾	.05½	.05¾
GULF COAST (Export)—						
41-43 prime white	.07		.07		.07	
41-43 water white	.08		.08		.08	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

	Aug. 13		Aug. 6		July 30	
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil, per bbl.	.45	.50	.45	.50	.45	.50
18-22 Fuel Oil, per bbl.	.50	.55	.50	.55	.50	.55
20-22 Fuel Oil, per bbl.	.55	.60	.55	.60	.55	.60
22-26 Fuel Oil, per bbl.	.62½	.67½	.62½	.67½	.60	.65
24-26 Fuel Oil, per bbl.	.70	.75	.67½	.72½	.65	.70
26-30 Fuel Oil, per bbl.	.80	.85	.80	.85	.77½	.82½
28-30 Fuel Oil, per bbl. (industrial)	.85	.90	.85	.90	.80	.85
32-36 Gas Oil (industrial)	.02½	.02⅝	.02⅜	.02⅝	.02⅜	.02½
32-36 Gas Oil (straw color)	.02⅝	.02⅞	.02⅝	.02⅞	.02½	.02¾
36-38 Distillate	.03¼	.03⅜	.03⅛	.03¼	.03	.03⅛
38-40 Straw Distillate	.03½	.03¾	.03⅜	.03¾	.03¼	.03½
NORTH TEXAS—						
Below 20 Fuel Oil	.60	.65	.60	.65	.60	.65
24-26 Fuel Oil, per bbl.	.65	.70	.65	.70	.65	.70
32-36 Gas Oil (straw)	.02⅝	.02¾	.02⅝	.02¾	.02½	.02¾
38-40 Straw Distillate	.03⅜	.03⅝	.03⅜	.03⅝	.03¼	.03½
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.75		.75		.75	
30-32 Gas Oil	.02¾	.03	.02¾	.03	.02½	.02¾
***ARKANSAS—**						
33-36 Distillate	.03	.03¼	.03	.03¼	.03	.03¼
30-32 Gas Oil	.02¾	.03	.02¾	.03	.02¾	.03
16-22 Refinery Fuel Oil, per bbl.	.75		.75		.75	
GULF COAST (South Texas)—						
Gas Oil	.04		.04		.04	
Bunker C Fuel (cargo lots), per bbl.	.70	.80	.70	.80	.70	.80
Bunker C Fuel (small lots)	.95	1.00	.90	.95	.90	.95
PENNSYLVANIA—						
30-34 Fuel Oil	.04⅛	.04¼	.04⅛	.04¼	.04⅛	.04¼
36-40 Fuel Oil	.04⅜	.04½	.04⅜	.04½	.04⅜	.04½
CALIFORNIA—						
33-36 Distillate	.04	.04½	.04	.04½	.04	.04½
26-32 Distillate	.03	.03½	.03	.03½	.03	.03½
15-20 Fuel Oil, Bunker (at tide water)	.65	.85	.65	.85	.65	.85
15-20 Fuel Oil (cargo lots), per bbl.	.70	.85	.70	.85	.70	.85
27 plus Diesel, per bbl.	.90	1.05	.90	1.05	.90	1.05
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.62½	.67½	.62½	.67½	.62½	.67½
18-22 Fuel Oil, per bbl.	.50	.55	.50	.55	.50	.55
28-30 Fuel Oil	.90	.95	.90	.95	.90	.95
32-36 Gas Oil (zero)	.02⅝	.02¾	.02½	.02¾	.02⅝	.02¾
32-36 Gas Oil (industrial)	.02½	.02⅝	.02⅜	.02½	.02⅜	.02½
36-38 Distillate	.03¼	.03⅜	.03¼	.03⅜	.03¼	.03⅜
38-40 Straw Distillate	.03⅜	.03⅝	.03⅜	.03⅝	.03⅜	.03⅝

*Louisiana, Arkansas, Mississippi, East Texas delivery.

LUBRICATING OIL AND WAX

	Aug. 13		Aug. 6		July 30	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06¾	.07	.06¾	.07	.06¾	.07
100 vis., 3 color, 20-25 cold test	.05¾	.06	.05¾	.06	.05¾	.06
150 vis., 3 color, 20-25 cold test	.07¾	.08	.07¾	.08	.07¾	.08
150 vis., 4 color, 20-25 cold test	.07¼	.07½	.07¼	.07½	.07¼	.07½
180 vis., 3 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
180 vis., 5 color, 23-28 cold test	.08½	.08¾	.08½	.08¾	.08½	.08¾
200 vis., 3 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
200 vis., 4 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
200 vis., 5 color, 23-28 cold test	.08¾	.09	.08¾	.09	.08¾	.09
240 vis., 3 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 4 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
240 vis., 5 color, 25-30 cold test	.11¾	.12	.11¾	.12	.11¾	.12
280 vis., 3 color, 25-30 cold test	.15¾	.16	.15¾	.16	.15¾	.16
280 vis., 4 color, 25-30 cold test	.14¾	.15	.14¾	.15	.14¾	.15
280 vis., 5 color, 25-30 cold test	.13¾	.14	.13¾	.14	.13¾	.14
Cylinder Stocks:						
600, steam refined, light green	.14	.16	.14	.16	.14	.16
600, steam refined, dark green	.13	.14	.13	.14	.13	.14
190-200 vis., D color Bright Stock	.40		.40		.40	
150-160 vis., D color Bright Stock	.35	.36	.35	.36	.35	.36
150-160 vis., E color Bright Stock	.33		.33		.33	
Waxes:						
124-126 White Crude Scale Wax	.02⅝	.02¾	.02⅝	.02¾	.02½	.02⅝
PENNSYLVANIA—						
34 Neutral	.07½	.07¾	.07½	.07¾	.07½	.07¾
34 Sundebloom	.07½	.07¾	.07¾	.08	.07¾	.08
36 Miners' Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
150, 3 color	.18½	.19	.20	.20¼	.20	.20¼
180, 3 color	.25	.25½	.25	.25½	.25	.25½
200, 3 color	.25½	.26	.27	.27½	.27	.27½
220, 3 color	.28½	.29	.29½	.30	.29½	.30
600, steam refined	.24½	.25	.25½	.26	.25½	.26
635, steam refined	.28	.28½	.31	.32	.31½	.32
650, steam refined	.29	.29½	.31½	.32	.33	.34
600, Pennsylvania Flash	.30	.31	.32	.33	.33	.34
630, Pennsylvania Flash	.37	.37½	.39	.40	.39	.40
600, E filtered	.33	.33½	.33	.34	.33	.34
600, D filtered	.36	.37	.36	.37	.36	.37
Pennsylvania Bright Stock	.51	.51½	.51	.52	.51	.52
*122-124 White Crude Scale Wax	.02¾	.02⅞	.02¾	.02⅞	.02¾	.02⅞
*124-126 White Crude Scale Wax	.02⅞	.03	.02⅞	.03	.02⅞	.03

*At New York.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.05¾	.06½	.06½	.07	.06½	.07
No. 3 color, 200 vis., pale oil	.09	.09½	.09	.09½	.09½	.10
No. 3 color, 300 vis., pale oil	.09¾	.10¼	.09¾	.10¼	.10½	.10¾
No. 3½ color, 500 vis., pale oil	.11½	.12	.11½	.12	.11¾	.12¼
No. 4 color, 750 vis., pale oil	.12½	.13	.12½	.13	.13	.13½
No. 5 to 6 color, 200 vis., red oil	.08	.08½	.08	.08½	.08½	.08¾
No. 5 to 6 color, 300 vis., red oil	.08¾	.09¼	.08¾	.09¼	.09¾	.10¼
No. 5 to 6 color, 500 vis., red oil	.09½	.10	.09½	.10	.10¾	.11½
No. 5 to 6 color, 750 vis., red oil	.11¾	.12¼	.11¾	.12¼	.12	.12½
No. 2½ color, 200 vis., pale filtered	.11	.12	.11	.12	.11	.12
No. 2½ color, 300 vis., pale filtered	.12	.13	.12	.13	.12	.13
No. 2½ color, 500 vis., pale filtered	.14½	.15	.14½	.15	.14½	.15
No 2½-3 color, 750 vis., pale filtered	.17	.19	.17	.19	.17	.19

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

CALIFORNIA—

130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11¾
300 vis., 3-3½ color	.13	.13½	.13	.13½	.13	.13½
350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½
Red Neutral:						
200 vis., 4½-5 color	.11	.11¼	.11	.11¼	.11	.11¼
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14
500 vis., 4½-5 color	.14¼	.15½	.14¼	.15½	.14¾	.15½
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Aug. 13		Aug. 6		July 30	
Gasoline, U. S. Motor, 58-60, 437	.09½	.10	.10		.10	.11
Kerosene, water white, 41-43	.07¾	.08	.07¾	.08	.07¾	.08
*Fuel Oil, Bunker "C," 14-16, per bbl.	1.05		1.05		1.05	
†Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.05¼		.05¼		.05¼	
25 pale Paraffin Oil	.10½		.10½		.10½	
28 pale Paraffin Oil	.07¼		.07¼		.07¼	
285 red Paraffin Oil	.11½		.11½		.11½	
250 red Paraffin Oil	.11		.11		.11	
225 red Paraffin Oil	.09½		.09½		.09½	
200 red Paraffin Oil	.09		.09		.09	
Refined Wax:						
120-122 a.m.p., per lb.	.03½		.03½		.03⅜	
125-127 a.m.p., per lb	.04		.04		.03⅞	
130-132 a.m.p., per lb.	.04¾		.04¾		.04⅜	
133-135 a.m.p., per lb.	.06		.06		.06	
135-137 a.m.p., per lb.	.06⅛		.06⅛		.06¼	
Petrolatum in barrels, carload lots, per pound:						
Dark green	.019		.019		.019	
Amber	.03⅝		.03⅝		.03⅝	
Extra amber	.03⅞		.03⅞		.03⅞	
Cream	.06⅜		.06⅜		.06⅜	
Lily White	.07⅝		.07⅝		.07⅝	
Snow White	.08⅜		.08⅜		.08⅜	

*Lighterage 5.0 cents a barrel extra. †Lighterage 6.5 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Aug. 13		Aug. 6		July 30	
Kerosene, prime white	.08		.08		.08	
Kerosene, water white	.09		.09		.09	
600, steam refined cylinder stocks, in bbls.	.31	.34	.31	.34	.33	.37
635, steam refined	.33	.36	.33	.36	.35	.38
650, steam refined	.37	.40	.37	.40	.40	.43
600, Pennsylvania Flash	.43	.44	.43	.44	.47	.48
630, Pennsylvania Flash	.47	.49	.47	.49	.51	
600, Warren E	.40		.40		.42	
600, Oil City E	.39		.39		.41	
Light 140-150 Bright Stocks	.60		.60		.60	
Dark 140-150 Bright Stocks	.58	.59	.58	.59	.59	

LOS ANGELES EXPORT PRICES

	Aug. 13		Aug. 6		July 30	
Kerosene, water white	.05	.05½	.05	.05½	.05	.05½
U. S. Motor Gasoline, 53-55 437 e.p.	.07	.07½	.07	.07½	.07	.07½

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Corsicana heavy (January 11)* ..... .80
Other fields .....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.

WEST TEXAS

Iatan* .....Same as North Texas
Crane-Upton-Crockett, Pecos, Winkler, Mitchell, and Glasscock (See gravity table).
Chalk† ..... .65

*Includes Howard County and Westbrook Fields.
†Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover, below 24 gravity (May 20, 1929) .....$ .85
Smackover, 24 gravity and above (May 20, 1929) 1.00
Cotton Valley (Below 36 gravity May 22) ..... .85
Bellevue (May 29, 1929) 1.30
Urania (May 21, 1929) 1.10
East El Dorado (May 22, 1929) ..... .85
Other fields .....See gravity table

Cotton Valley crude above 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.

Note—Smackover, Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana, and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co.

GULF COAST

Grade A (May 20)* $1.30
Grade B .....See gravity table
Jennings, La. (March 14)† 1.05
Saratoga, Batson, Dayton (March 14, 1927)‡ 1.20
Markham (March 14)§ 1.00
High Island (December 14)¶ 1.00

*Humble Oil & Refining Co., The Texas Company, Gulf Pipe Line Co., and Sun Pipe Line Co. †Gulf Pipe Line Co. ‡Sun Pipe Line Co. §The Texas Company.
¶Posted by Gulf Pipe Line Co.

ROCKY MOUNTAIN STATES
Ohio Oil Co.-Midwest Refining Co.
(Effective May 21, 1929)

Rock Creek, Wyo. $1.40
Salt Creek .....See gravity table
Big Muddy 1.43
Grass Creek, heavy (July 27, 1928) ... .90
Grass Creek, light 1.65
Mule Creek 1.20
Elk Basin 1.65
Lance Creek 1.68
Poison Spider (March 14, 1927) 1.00
Notches (March 14, 1927) ..... .65
Rex Lake (February 22) 1.10
Osage 1.65
Lost Soldier (contract, May 22) 1.05
Hamilton Dome (March 14, 1927) ..... .85
Pedro 1.25
Greybull 1.65
Four Bear ..... .85
Cat Creek (Montana) (July 27, 1928). 1.45
Sunburst (Montana) (May 23, 1929) ... 1.75
Torchlight 1.65
Hogback (New Mexico) 1.70

Note—Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTH-WESTERN TEXAS

Luling (May 2)* .....$ .90

(Continued on Page 144)

CRUDE OIL GRAVITY TABLE

Gravity—	1 Okla., Kans. N. C. Texas	2 No. La. and Arkansas	3 Crane, Upton, Crockett, Winkler, Howard, Pecos, Texas crudes, and Lea, N. Mex.	4 Stephens, Ark.	5 Wheeler (Texas Panhandle)	6 Gray County (Texas Panhandle)	7 Carson and Hutchinson (Texas Panhandle)	8 Salt Creek, Wyo.	9 Grade B and Light Crude (G. Coast)	10 Somerset (South Central Texas)
24 and above	....	....	....	....	....	....	....	....	....	....
Below 24	....	....	....	....	....	....	....	....	....	....
Below 25	.85	....	.70	....	....	....	....	....	1.15	....
25 to 25.9	.90	....	.74	....	....	....	....	....	1.18	....
26 to 26.9	.95	....	.78	....	....	....	....	....	1.21	....
27 to 27.9	1.00	....	.82	....	....	....	....	....	1.24	....
Below 28	....	1.00	....	.90	.90	.90	.90	....	....	....
28 to 28.9	1.05	1.05	.86	.94	.90	.90	.90	....	1.27	....
29 to 29.9	1.10	1.10	.90	.98	.90	.95	.90	1.10	1.30	....
30 to 30.9	1.15	1.15	.94	1.02	.95	1.00	.90	1.15	1.33	....
31 to 31.9	1.20	1.20	.98	1.06	1.00	1.05	.90	1.20	1.36	....
32 to 32.9	1.25	1.25	1.02	1.10	1.05	1.10	.95	1.25	1.39	1.05
33 to 33.9	1.30	1.30	1.06	....	1.10	1.15	1.00	1.30	1.42	1.07
34 to 34.9	1.35	1.35	1.10	....	1.15	1.20	1.05	1.35	1.45	1.09
35 to 35.9	1.40	1.40	1.14	....	1.20	1.25	1.10	1.40	1.48	1.11
36 to 36.9	1.45	1.45	1.18	....	1.25	1.30	1.15	1.45	....	1.13
37 to 37.9	1.50	1.50	....	....	1.30	1.35	1.20	1.50	....	1.15
38 to 38.9	1.55	1.55	....	....	1.35	1.40	1.25	....	....	1.17
39 to 39.9	1.60	1.60	....	....	1.40	1.45	1.30	....	....	....
40 to 40.9	1.65	1.65	....	....	1.45	1.50	1.35	....	....	....
41 to 41.9	1.70	1.70	....	....	1.50	1.55	1.40	....	....	....
42 to 42.9	1.75	1.75	....	....	1.55	1.60	1.45	....	....	....
43 to 43.9	1.80	1.80	....	....	1.60	1.65	1.50	....	....	....
44 and above	1.85	1.85	....	....	1.65	1.70	1.55	....	....	....

Column 1, Note—Magnolia Petroleum Co. posted schedule May 20, 1929, making price below 26 gravity 70 cents per barrel, 26-26.9 gravity 75 cents, 27-27.9 gravity 85 cents, 28-28.9 gravity 90 cents, 29-29.9 gravity 95 cents, 30-30.9 gravity $1.05, and 31-31.9 gravity $1.15, with balance of the price schedule as shown above.

Oklahoma—Carter Oil Co., Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., The Texas Company, May 20.

North Central Texas—Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Nocona and Moran, Prairie Oil & Gas Co., Sinclair Oil Refining Co., Humble Oil & Refining Co., The Texas Company and Gulf Refining Co., May 20.

Kansas—Prairie, Sinclair, The Texas Company and Carter, May 20.

Column 2—Arkansas and Nor.h Louisiana—[Caddo, Bull Bayou, Crichton, Cotton Valley, above 36 gravity, DeSoto, Haynesville, Homer and El Dorado only] May 22, Standard Oil Co. of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co., Magnolia Petroleum Co., schedule applies to Pine Island, Haynesville, Bull Bayou, Louisiana and El Dorado, Ark., light crude.

Column 3—Humble Oil & Refining Co. and Magnolia Petroleum Co., May 20.

Column 4—Atlantic Oil Producing Co., Prairie Oil & Gas Co., Louisiana Oil Refining Corp., May 21, 1929.

Columns 5, 6 and 7—Humble Oil & Refining Co., Magnolia Petroleum Co., May 20, 1929.

Column 8—Midwest Refining Co., May 20, 1929. All crude over 37 gravity $1.50 per barrel

Column 9—Humble Oil & Refining Co., May 20, 1929 (schedule ends 35 and above).

Column 10—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective January 18, 1929)

Gravity—	1 Salt Lake, Potrero, Newport, Long Beach, Summerland, Inglewood, Los Angeles, Fullerton, Richfield, Torrance, Olinda-Brea, Alamitos Heights, Signal Hill, Seal Beach, Huntington Beach, Athens, Inglewood, Rosecrans-Dominguez, Watsonville	2 Whittier, La Habra, Coyote Hills	3 Midway-Sunset, Elk Hills, Lost Hills, Beiridge, Buena Vista Hills	4 Montebello	5 Santa Fe Springs	6 Santa Maria, Coalinga	7 Wheeler Ridge, Fruitvale	8 Orcutt Ventura, Rincon	9 Ventura Ave.	10 Elwood Terrace
14 to 14.9	.70	70	50	70		50	50	65	70	
15 to 15.9	.70	70	.50	70	....	50	50	65	.70	....
16 to 16.9	70	70	.50	70	....	50	50	65	70	....
17 to 17.9	70	70	50	70	....	50	50	65	.70	....
18 to 18.9	75	75	.56	70		.56	56	70	75	....
19 to 19.9	80	80	62	75	....	62	62	70	.80	....
20 to 20.9	85	84	68	80	....	68	68	70	85	....
21 to 21.9	.89	88	.74	85	89	74	74	80	86	....
22 to 22.9	93	91	80	90	92	80	80	87	87	
23 to 23.9	97	94	.85	95	.95	85	.85	90	90	
24 to 24.9	1.01	97	.90	98	98	88	.88	94	94	....
25 to 25.9	1 05	1 00	95	1 01	1 01	.91	91	.98	98	....
26 to 26.9	1.09	1 04	1 00	1 04	1 04	.94	94	1 02	1 02	....
27 to 27.9	1.13	1 08	1.05	1 07	1.07	98	.97	....	1 06	....
28 to 28.9	1 17	1 12	1 10	1 10	1 10	1 02	....	....	1 10	....
29 to 29.9	1.21	1 16	1 16	1 13	1 15	1.06	..	....	1 14	....
30 to 30.9	1.25	1.20	1.22	1 16	1.20	1 10	....	....	1.18	....
31 to 31.9	1 30	....	1 28	....	1 25	1 14	....	....	1 23	....
32 to 32.9	1 35	....	1 34	....	1 30	1.18	....	....	1 28	....
33 to 33.9	1 41	....	1.40	....	1 35	1.22	....	....	1.34	....
34 to 34.9	1 47	....	1.46	..	1 40	1.26	....	....	1 40	1 16
35 to 35.9	1 53	....	....	....	1 45	1.30	....	....	1 46	1.22
36 to 36.9	1 59	....	....	....	1 50	....	....	....	1 52	1.28
37 to 37.9	1 65	....	....	....	1 55	....	....	....	1.58	1 34
38 to 38.9	1 71	....	....	....	1 60	....	....	....	1 64	1 40
39 to 39.9	1.77	....	....	....	1 65	....	....	....	1.70	1 46
40 to 40.9	1.83	....	....	....	....	....	....	....	1 76	1 52
41 to 41.9	1 89	....	....	....	....	....	....	....	1 82	1.58
42 to 42.9	1 95	....	....	....	....	....	....	....	1 88	1.64

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain 11 to 13.9 gravity 45 cents, 14 gravity and above 50 cents, effective October 2, 1929. On December 1, 1928, the Union Oil Co. posted Midway-Sunset, Elk Hills, Buena Vista, Los Hills and Coalinga crude as follows: 11 to 13.9 gravity at 45 cents, 14 gravity and above 50 cents.

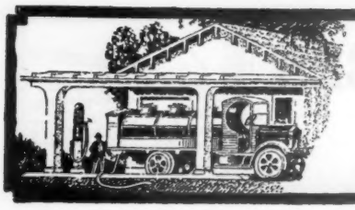
Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity; Dominguez and Athens-Rosecrans, 24 to 42.9 gravity.

Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 19.9 gravity; Midway-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 45 cents.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9—Posted by Union Oil Co. only.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Aug. 13.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago dist.†..	19.0	20 0	3.0	13.0
Decatur, Ill. ...	19.2	20.2	3.0	13.1
E. St. Louis ...	18.4	17.4	3.0	12.2
Joliet	19.4	20.4	3.0	13.3
Peoria	19.2	20.2	3.0	13.1
Quincy	19.2	20.2	3.0	12.9
Davenport, Ia..	19.5	20.5	3.0	13.3
Des Moines ...	19.5	20.5	3.0	13.3
Keokuk	19.5	20.5	3.0	13.3
Sioux City	19.1	20.1	3.0	12.9
Duluth, Minn..	20.5	21.5	3.0	13.9
Mankato	20.1	21.1	3.0	13.7
Minneapolis	20.2	21.2	3.0	12.9
LaCrosse, Wis..	19.2	20.2	2.0	14.0
Milwaukee	18.1	19.1	2.0	12.9
Madison	17.2	18.2	2.0	13.1
Detroit, Mich...	19.8	20.8	3.0	14.7
Grand Rapids..	19.7	20.7	3.0	14.6
Saginaw	19.9	20.9	3.0	14.8
Evansville, Ind.	20.0	21.0	4.0	14.0
Fort Wayne ...	20.4	21.4	4.0	14.4
Indianapolis ..	20.2	21.2	4.0	14.2
South Bend ...	20.4	21.4	4.0	14.4
Fargo, N. D. ..	21.9	22.9	3.0	15.9
Huron, S. D. ..	21.3	22.3	4.0	14.7
Sioux Falls	20.1	21.1	4.0	14.4
K. C., Mo.* ...	18.9	19.9	3.0	11.6
Springfield* ...	18.8	19.8	3.0	12.5
St. Louis*	17.9	18.9	2.5	12.3
St. Joseph	18.5	19.5	2.0	12.0
Wichita, Kans..	17.8	18.8	3.0	11.8
Bartlesville, Ok.	18.5	19.5	4.0	11.5

*State tax 2 cents; remainder city tax.
†Effective February 20, discounts on Q.D.A. in Chicago district 2 cents off service station price on purchases of 500 gallons or more per month and 4 cents on purchases of 1,000 gallons or more per month.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	15.7	12.9
V. M. & P. Naphtha	17.2	13.9
Cleaner's naphtha	17.0	14.9
Stanisol	18.0	15.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline; 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2½ cents; more than 6,000 gallons, 3 cents. Discounts are allowed each month, and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex. ...	17.0	21.0	4.0	13.0
Fort Worth ...	17.0	20.0	4.0	12.0
Houston	17.0	21.0	4.0	11.0
San Antonio ...	17.0	21.0	4.0	11.0
El Paso	17.0	21.0	4.0	16.0
Texarkana	17.0	19.0	4.0	12.0
Muskogee, Ok.*	17.0	20.0	4.0	13.0
Okla. City* ...	17.0	20.0	4.0	10.0
Tulsa*	15.0	19.0	4.0	10.0
Ft. Smith, Ark.	15.0	17.0	5.0	12.0
Little Rock ...	19.0	23.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo...	18.0	21.0	4.0	15.5
Pueblo	18.0	21.0	4.0	15.5
Grand Junction	22.5	25.5	4.0	19.0
Casper, Wyo. ..	21.0	24.0	4.0	14.0
Cheyenne	22.0	25.0	4.0	15.5
Butte, Mont. ..	25.5	28.5	5.0	20.0
Helena	25.5	28.5	5.0	20.0
Salt Lake, Utah	22.0	25.0	3.5	17.0
Albu'que, N. M.	21.0	24.0	5.0	17.0
Boise, Idaho ..	24.5	27.5	4.0	19.0
Twin Falls	24.5	28.5	4.0	19.0

PENNSYLVANIA—DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa..	17.0	*23.0	...	14.0
Philadelphia ..	17.0	*23.0	...	14.0
Scranton	17.0	*23.0	...	14.0
Allentown	17.0	*23.0	...	14.0
Altoona	17.0	*23.0	...	14.0
Erie	14.0	*19.0	...	14.0
Dover, Del. ...	20.0	22.0	3.0	14.0
Wilmington	20.0	22.0	3.0	14.0
Springf'd, Mass.	18.0	20.0	3.0	15.0
Worcester	17.0	18.0	2.0	15.0
Boston	18.0	20.0	2.0	15.0
Providence, R.I.	16.0	17.0	2.0	15.0
Hartford, Conn.	18.0	20.0	2.0	14.0
New Haven ...	18.0	20.0	2.0	15.0

*Includes tax of 4.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y...	18.0	20.0	2.0	15.0
New York* ...	19.0	21.0	2.0	16.0
Buffalo	18.0	20.0	2.0	14.0
Rochester	18.0	20.0	2.0	14.0
Syracuse	18.0	20.0	2.0	15.0
Boston, Mass...	18.0	20.0	2.0	15.0
Augusta, Me....	20.0	22.0	4.0	15.0
Manch't'r, N.H.	20.0	22.0	4.0	15.0
Burlington, Vt..	19.0	20.0	4.0	15.0

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga. ...	20.0	22.0	4.0	16.5
Augusta	20.0	22.0	4.0	15.5
Macon	21.0	23.0	4.0	16.5
Savannah	20.0	22.0	4.0	15.5
Birm'ham, Ala..	20.0	22.0	4.0	15.0
Mobile	20.0	22.0	4.0	15.0
Montgomery ...	21.0	23.0	4.0	16.5
Clarks'le, Miss..	20.0	22.0	5.0	12.5
Jackson	21.0	23.0	5.0	13.0
Natchez	20.5	22.5	5.0	14.0
Gulfport	22.5	24.5	5.0	14.0
Vicksburg	20.5	22.5	5.0	14.0
Jack'ville, Fla..	22.0	24.0	6.0	14.5
Miami	23.0	25.0	6.0	15.5
Pensacola	23.0	25.0	6.0	14.5
Tampa	22.0	24.0	6.0	15.5
Lexington, Ky..	21.0	22.0	5.0	15.5
Covington	21.0	22.0	5.0	15.5
Louisville	21.0	23.0	5.0	15.0
Ashland	18.0	19.0	5.0	15.5
Catlettsburg ..	18.0	19.0	5.0	15.5

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. Pensacola and Mobile taxes include 1-cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
San Francisco.	20.0	24.0	3.0	15.5
Los Angeles ..	19.5	23.5	3.0	15.5
Reno, Nev.	24.0	26.0	4.0	19.0
Portland, Ore ..	20.5	24.5	3.0	16.5
Seattle, Wash..	19.5	23.5	3.0	16.5
Tacoma	19.5	23.5	3.0	16.5
Spokane	23.5	27.5	3.0	20.5
Phoenix, Ariz..	18.0	22.0	4.0	20.5

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	20.25	22.25	4.0	13.25
McCook	21.75	23.75	4.0	14.75
Norfolk	20.75	22.75	4.0	13.75
N. Platte	21.75	23.75	4.0	14.50
Scottsbluff	21.75	23.75	4.0	14.25

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlantic City ..	14.0	18.0	2.0	13.0
Newark, N. J...	16.0	20.0	2.0	13.0
Annapolis, Md..	18.0	22.0	4.0	13.0
Baltimore	18.0	22.0	4.0	12.0
Cumberland ...	18.0	22.0	4.0	13.0
Washington ...	16.0	20.0	2.0	12.0
Danville, Va. ..	19.0	23.0	5.0	12.0
Norfolk	19.0	23.0	5.0	13.0
Petersburg	19.0	23.0	5.0	13.0
Roanoke	18.0	21.0	5.0	13.0
Richmond	19.0	23.0	5.0	13.0
Charles'n, W.Va.	18.0	22.0	4.0	13.0
Keyser	18.0	22.0	4.0	13.0
Parkersburg ...	18.0	22.0	4.0	13.0
Wheeling	18.0	22.0	4.0	13.0
Charlotte, N. C.	19.0	23.0	5.0	13.0
Hickory	19.0	23.0	5.0	13.0
Mt. Airy	19.0	23.0	5.0	13.0
Salisbury	17.0	20.0	5.0	13.0
Charleston, S.C.	20.0	24.0	6.0	13.0
Columbia	20.0	24.0	6.0	13.0

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points* ..	19.0	20.0	4.0	†13.0

*Dealers and commercial accounts 2 cents under tank wagon.
†Service station price 15 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.*	16.5	20.5	5.0	16.0
Baton Rouge ..	16.0	20.0	4.0	14.5
Alexandria† ...	18.0	22.0	5.0	16.0
Lafayette†	18.0	22.0	5.0	14.0
Lake Charles†..	18.5	22.5	5.0	16.0
Shreveport	17.5	21.5	4.0	15.0
Knoxv'le, Tenn.	20.0	24.0	5.0	16.0
Memphis	18.0	22.0	5.0	12.5
Chattanooga ..	20.0	24.0	5.0	16.0
Nashville	19.0	23.0	5.0	16.0
Bristol	19.0	23.0	5.0	14.0
Lt. Rock, Ark..	19.0	23.0	5.0	13.0

*Tax of 5 cents includes city tax of 1 cent. Louisiana Kerosene prices include 1-cent state tax and 1-cent parish tax.
†Includes 1-cent parish tax.

TANK WAGON CHANGES

August 3—Standard Oil Co. of New Jersey reduced the gasoline tank wagon and the service station prices in Salisburg, N. C., to 17 cents and 20 cents.

August 12—Standard Oil Co. of Indiana reduced gasoline station price to 17.4 cents at East Chicago, Ill., but the tank wagon price was unchanged at 18.4 cents.

July 26—Magnolia Petroleum Co. reduced kerosene 2 cents to 11 cents in Houston, Tex.

July 29—Magnolia Petroleum Co. reduced the gasoline tank wagon and station prices 1 cent each in Little Rock, Ark., to 19 cents and 23 cents.

August 9—Magnolia Petroleum Co. reduced the gasoline tank wagon 1 cent and the station price 3 cents to 15 and 17 cents respectively in Fort Smith, Ark.

NIAGARA OIL CO. BUYS 1,100 ACRES OF LEASES

BRADFORD, Pa., Aug. 10.—Recent purchase of oil property in this section by the Niagara Oil Corp., a subsidiary of the Forest Oil Corp., totaling 1,100 acres of oil leases, were made public yesterday. Plans for extensive development of the newly acquired property are being made by the Niagara Oil Corp., authorities stated.

The largest individual acquisition was the 325-acre lease of the Suhr-McSweeney Oil Co. located near Coleville. The 130-acre lease of the Premier Oil Co., which adjoins the Suhr-McSweeney lease, and the 130-acre lease purchased from the Paul & Evans Oil Co. are the two next largest individual acquisitions. The last named is situated near Rew City and was formerly the Wolfe lease.

Among the other purchases were: An 80-acre lease located at Knapp Creek and a 25-acre lease at Duke Center from E. M. Daly; the McKay lease at Derrick City, consisting of 72 acres, from Mrs. Martin McKay and sons, Homer and Harry McKay, of Rochester, formerly of Derrick City; 100 acres at Knapps Creek from the estate of M. E. Curtis; the holdings of the Bliss Oil Co., located at Knapps Creek, and consisting of 90 acres and the 30-acre lease of E. A. Smith at Knapps Creek.

SOUTHERN CALIFORNIA PERMIT

LOS ANGELES, Calif., Aug. 10.—Legal permission to lay a pipe line which will link in distributing Kettleman Hills natural gas has been granted the Southern California Gas Co. by the Kings County Board of Supervisors. The mains will extend from Lemoore to the Fresno County line under the new permit, and will be 8-inch pipe.

CALIFORNIA CONTRACT AWARDED

Virginia Pipe Line Co. has been awarded a contract for laying an auxiliary pipe line from The Texas Company's big absorption plant in Kettleman Hills oil field to the 16-inch main gas line being constructed between the San Joaquin Valley and San Francisco.

CRUDE OIL PRICES

(Continued from Page 143)

Mirando (May 20, 1929)†	.20
Salt Flat (May 20, 1929)‖	1.30
Rockdale-Minerva (April 15):	
Below 28 gravity	1.25
28-38.9 gravity	1.27
39-39.9 gravity	1.29
40 and above	1.31
Thrall‡	...
Callihan (May 15)	1.75
Lytton Springs (Lockhart)	See gravity table
Somerset	See gravity table

*Posted by Magnolia Petroleum Co.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.
‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight.
‖Humble Oil & Refining Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective August 1, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$2.55
Bradford District Oil in National Transit Lines (Pennsylvania)	2.55
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.55
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	2.50
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	2.40
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	2.25
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 22, 1929)	1.75
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Line (May 22, 1929).	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s Lines (May 22, 1929)	1.90
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (May 22, 1929) ...	1.80
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29) ...	.60

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective May 21, 1929)

Lima	$1.80
Wooster	1.90
Illinois	1.75
Indiana	1.57
Princeton	1.75
Plymouth	1.80
Waterloo (November 17, 1926)	1.85
Western Kentucky	1.83
Dundee, Mich. (June 26, 1929)‖	1.25
Upper and Lower Traverse sands, Mich.‖	
.....Same as Mid-Continent gravity scale	
Midland, Mich. (June 3, 1929)*	1.70
Saginaw, Mich., Saginaw Sand (February 10)†	1.80
Saginaw, Mich., Berea Sand (February 10)†	1.75
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky, (March 15)‡	1.50
Oil in line in Stoll Oil Refining Co. in Oil City, Ky. (June 1, 1929)‖	1.80
Oil Springs (Canada)¶	2.37
Petrolia (Canada)‖	2.30

*Posted by Pure Oil Co.
†Posted by Sun Oil Co.
‡Posted by Paragon Development Co.
‖Posted by Stoll Oil Refining Co.
¶Posted by Imperial Oil Co., Ltd.
‖Posted by Standard of Indiana for boat shipment.

MEXICAN CRUDE

Panuco (May)*	$ .644

*Based on July transactions. Price exclusive of taxes.

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Renewed Buoyancy Marks Oil Shares

Improved Tone Attributed to Earnings, Big Consumption and Strong Hope in Efficacy of California's Conservation Law

After scraping bottom for several weeks as a result of the continued overproduction of crude, the oil shares displayed renewed buoyancy this week. The improved tone manifested by virtually all the major issues was attributed to excellent reports of earnings, to enormous consumption of refined products and to a stronger hope that the new gas conservation law in California would be enforced vigorously and result in checking the overproduction of petroleum in that State. Standard of New Jersey, Atlantic Refining, Sinclair, Prairie Pipe, Barnsdall, Skelly and Pan American were among the oil stocks actively bought.

Standard of Kansas

Standard Oil Co. of Kansas reports for six months ended June 30, 1929, net profit of $459,939 after taxes, depreciation, etc., equivalent to $1.44 a share (par $25) on 320,000 shares of capital stock. Income account for six months ended June 30, 1929, follows: Sales $3,897,953; cost of sales and expenses $3,345,816; operating profit $552,137; other income $52,812; total income $604,947; taxes $37,436; depreciation reserve $107,572; net profit $459,939.

Atlantic Refining

Atlantic Refining Co. declared the usual extra dividend of 25 cents and the regular quarterly dividend of 25 cents, both payable September 16 to stock of record August 21.

H. F. Wilcox Oil & Gas

H. F. Wilcox Oil & Gas Co. reports for six months ended June 30, 1929, consolidated net profit of $222,784 after interest, depreciation, depletion, federal taxes, etc., equivalent to 52 cents a share earned on 427,967 no-par shares of stock. This compares with $38,184 or 8 cents a share in first half of 1928.

Net profit for the June quarter was $155,175 after above charges, equal to 36 cents a share, compared with $67,610 or 16 per cent a share in preceding quarter.

Plymouth Oil

Plymouth Oil Co. declared a dividend of 50 cents, payable August 31 to stock of record August 19. Last dividend of 50 cents was paid May 15.

Empire Gas & Fuel

Empire Gas & Fuel Co. declared regular monthly dividends of 50 cents on 6 per cent preferred, 54 1-6 cents on 6½ per cent preferred, 58⅓ cents on 7 per cent preferred, and 66⅔ cents on 8 per cent preferred, all payable August 31 to stock of record August 15.

Imperial Oil

Imperial Oil, Ltd., declared the regular quarterly dividend of 12½ cents, payable September 2 to stock of record August 15.

Standard of Nebraska

Standard Oil Co. of Nebraska declared an extra dividend of 25 cents and regular quarterly dividend of 62½ cents, both payable September 20 to stock of record August 24. A similar extra was paid last quarter.

Signal Oil & Gas

Signal Oil & Gas Co. and subsidiaries report for six months ended June 30, 1929, net profit of $666,382 after depreciation, depletion, federal taxes and minority interests, equivalent to $3.21 a share (par $25) on combined 207,490 shares of Class A and Class B stocks.

Reiter-Foster Oil

Reiter-Foster Oil Corp. declared an initial dividend of 10 cents, payable September 1 to stock of record August 15.

Southern Natural Gas

Issue of $13,000,000 Southern Natural Gas Corp. first mortgage 6 per cent sinking fund bonds, 1944, with common stock purchase privilege, is being offered at 97½ and interest, to yield over 6.25 per cent. After July 1, 1930, and subject to previous redemption, the holder of each $1,000 bond will be entitled to purchase 30 common shares stock to July 1, 1932, at $12.50; to July 1, 1935, at $17.50; and, thereafter, to July 1, 1938, at $25, after which date the stock purchase privilege will be void.

Warner-Quinlan

Warner-Quinlan Co. and subsidiaries report for six months ended June 30, 1929, net profit of $1,072,872 after depreciation, depletion, interest, taxes, etc., equivalent to $2.02 a share earned on 530,950 average number of no-par shares outstanding during the period. This compares with $707,310 or $2.27 a share on 285,613 average common shares in first six months of 1928, after preferred dividends.

Pacific Oil

Pacific Oil Co. for year ended December 31, 1928, reports loss of $533,674 from the sale and exchange of oil receivable at January 1, 1927, and of oils purchased subsequent to that date for which contracts were outstanding. After interest earned, loss was $219,609, against $43,453 in 1927. After interest and federal taxes for prior years net loss carried to surplus for year 1928, was $425,495, against $309,602 in 1927.

United Carbon

United Carbon Co. and subsidiaries report for quarter ended June 30, 1929, net profit of $425,904 after depreciation, depletion, interest and provisions for contingencies and federal taxes equivalent under the participating provisions of the shares to 94 cents a share on 237,661 no-par shares of common stock. This compares with $412,886, or 89 cents a share, on common in preceding quarter and $207,853, or 46 cents a share, on common in June quarter of 1928, based on present share basis. For six months ended June 30, net profit totaled $838,791 after above charges, equal to $1.85 a share on common after allowing for participating provisions of the shares against $350,586 in first half of previous year.

General Asphalt

Reporting net profit of $461,760 after interest, federal taxes, etc., equal to $1.41 a share on 210,614 shares of common after preferred dividends, in the six months ended June 30, General Asphalt Co. reports one of the best first half-year periods in its history.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Saturday, was as follows:

March 2	56.43	Aug. 3	55.09
March 9	55.36	Aug. 10	54.15
March 16	58.63	May 25	57.73
March 23	58.52	June 1	56.45
March 30	58.57	June 8	58.37
April 6	58.26	June 14	57.76
April 13	58.52	June 21	56.76
April 20	58.46	June 28	56.70
April 27	58.34	July 5	56.52
May 4	58.14	July 12	55.89
May 11	59.75	July 19	56.83
May 18	59.30	July 26	55.62

Standard of California

The Standard Oil Co. of California has declared a regular dividend of 62½ cents a share, payable September 16 to stockholders of record August 15.

Richfield Oil

Net earnings of Richfield Oil Co. of California, including Pan American Western Petroleum Co. and subsidiaries but excluding Richfield Oil Corp. of New York, for the first six months of 1929, totaled $4,246,397 after all charges, including provision of federal income tax, or equal to $2.03 per share after preferred dividends on 1,922,310 shares of common stock outstanding at June 30, 1929, according to the report to stockholders of James A. Talbot, chairman of the board, and C. M. Fuller, president.

SCOUT ASSOCIATIONS DECIDE NOT TO MERGE

Mid-Continent Oil Scouts and Land Men's Association has decided not to become affiliated with the National Oil Scouts and Land Men's Association according to an announcement by Ralph Walkingstick, of Shawnee, Okla., with the Tidal Oil Co. and president of the Mid-Continent association. There will be no merger this year and all negotiations for such action have been halted until new officers have been elected by the national association.

A committee consisting of Ralph Walkingstick, Simon Crites, with the Phillips Petroleum Co., C. W. Michaels, with the Shaffer Oil & Refining Co. and others, conferred recently at Fort Worth, with representatives of the national association. It was decided by the Mid-Continent scouts that the meetings of the other associations would be held over too wide a territory to permit the Mid-Continent men to attend and the National scouts decided not to change their by-laws, therefore the decision was reached to make no changes and enter no mergers until some other time.

Under present conditions Mid-Continent scouts can attend the annual meetings in large numbers and no long trips are necessary, while the National association which covers the States of Texas, Louisiana, Arkansas, New Mexico, and

INDEPENDENT OILS ON NEW YORK CURB

Compiled by Francis, Bro. & Co., Kennedy Building, Tulsa, Okla.

1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low	Par value	Stocks	Week ended August 9: Sales	Open	High	Low	Last	Change
$6.75	.45	2 1/16	.55	1½	.53	.72	⅜	$5	Amer. Con. Oilfields	2,400	⅝	⅞	⅜	⅜	...
..	..	7½	2¾	9½	3⅛	8⅝	3½	N.P.	Amer. Maracaibo	2,000	3⅞	4	3¾	3¾	— ¼
..	..	2¾	1	4½	2¼	5	1⅞	$10	Argo Oil	700	2	2	1⅞	1⅞	...
85¼	60	40	20½	55	32¾	62	45	N.P.	British American	100	50½	50½	50½	50½	...
28⅜	9¼	28¼	15½	4½	3⅞	4⅞	2⅝	25c	Carib. Syndicate (new)	1,500	3¼	3½	3⅛	3¼	...
..	..	58¾	40¼	90⅞	54	47	28⅛	$20	Cities Service	86,100	45⅛	45½	44⅞	45⅜	...
..	..	95⅜	87	103½	94½	98¾	93½	100	Cities Service, pfd.	400	93½	93⅞	93½	93⅞	...
..	..	87⅞	73⅝	95⅜	87⅜	9¼	9	10	Cities Service, pfd. B	100	9	9	9	9	...
3½	1¾	3⅞	1⅛	3¼	.76	2	⅞	1	Colombia Syndicate	1,000	1	1	1	1	+ ¼
..	..	9¾	6⅜	8⅞	6¼	11⅛	6⅞	10	Consolidated Royalty	100	6	6	6	6	+ ⅜
16	10	14⅞	9½	17½	9½	11¾	7⅞	N.P.	Creole Syndicate	17,800	8¼	8⅞	8	8½	+ ⅜
..	..	3	.50	3¼	.76	2½	1⅛	N.P.	Crown Central	400	1½	1½	1⅜	1⅜	...
7⅞	6¾	12	4	33½	3¼	26	14	N.P.	Darby Petroleum	700	13¼	13¼	12½	12½	— ¾
..	..	2½	74	2¼	1	11	2	N.P.	Derby Oil & Ref.	2,200	8¼	8⅝	7⅝	7½	— ⅞
..	..	16¾	4	21⅛	7½	44	20⅞	N.P.	Derby Oil & Ref., pfd.	No sales.					
..	..	2	.40	.53	.15	..	..	N.P.	Gilliland ctfs.	No sales.					
98	92	118	86¼	165	101⅛	202⅞	142⅛	$25	Gulf Oil Corp.	5,000	183½	192⅜	180¼	186	+ 5¾
$3.00	.83	2½	.80	3⅜	1	2⅞	1¼	5	Intercontinental Pet.	4,000	1⅜	1⅜	1⅛	1⅛	— ½
..	..	2¼	1⅛	3	1⅛	3⅝	1⅜	N.P.	Kirby Petroleum	1,200	2	2¼	2	2¼	— ⅛
12¼	5¾	10⅞	5⅛	9⅜	5⅛	6⅛	2⅞	25	Leonard Oil & Dev.	3,400	4⅞	5	3⅛	3⅛	— 1⅞
27	20	27½	20	43⅞	20	38⅞	23⅛	N.P.	Lion Oil & Ref. Co.	600	30¼	30¼	30	30	...
46	30	59⅜	37	69½	48½	40	32¼	$25	Lone Star Gas	2,200	38½	44	38½	41	+ 2½
2⅞	1	2⅞	.80	1⅞	.50	1¼	⅜	1	Magdalena Syndicate	1,300	⅜	7/16	⅜	⅜	...
34	12½	52	12	48½	32	38½	20	N.P.	Margay Oil	400	22	22	21	21	...
8	5½	12⅛	5	8	2¾	6⅜	3⅜	N.P.	Mexico-Ohio Oil	200	3	3	3	3	...
1¾	1⅛	1½	1	1¾	.76	1½	⅞	$1	Mountain & Gulf	1,400	⅞	1	⅞	1	+ ⅛
26	23	29¼	22¾	28⅞	19½	22⅞	12	10	Mountain Producers	4,000	12⅛	12⅛	11⅛	11¼	— ¾
6⅝	5	5⅞	4⅝	5⅝	4¼	5	3⅜	5	New Bradford	700	3¼	3¼	3	3	— ¼
..	..	16	9¼	11⅞	7⅛	9⅜	5½	1	New Mex. & Ariz.	No sales.					
..	..	12¾	9½	14¼	8½	11⅞	3¾	N.P.	North Central Texas	1,800	18	18	16¼	16¼	— 1½
10⅛	5⅞	9⅜	3¼	6	2⅛	3½	1⅜	N.P.	Pandem	5,300	1¼	1¼	1	1⅛	— ⅛
12¼	11⅜	12⅛	7	15⅝	8½	10¼	5⅞	N.P.	Pantepec Oil	900	6¾	7⅞	5⅞	5⅞	— ⅛
22¾	12	13½	5⅛	7¾	4⅞	7⅜	4⅜	N.P.	Pennok Oil	No sales.					
17	8½	24⅜	7	18	4⅞	16	11½	25	Red Bank Oil	100	11	11	11	11	...
30¼	12	15½	3½	12⅞	4⅛	8½	4½	N.P.	Reiter-Foster	1,200	5⅝	5⅝	5	5	— ¾
7	4½	7	4½	12	4⅛	11	6	N.P.	Ryan Consolidated	500	5⅞	5⅞	5½	5¾	— ¼
10	7⅛	8	5¼	7¼	5½	5⅞	2⅜	$10	Salt Creek Cons.	1,600	2¾	2¾	2⅜	2⅜	— ⅜
35	24⅛	35½	27¼	35	23⅛	25⅞	14⅝	10	Salt Creek Prod.	3,900	14½	14½	13⅛	13¼	— 1
6⅞	1¼	7	1¼	3½	1	2½	1⅛	5	Savoy Oil	No sales.					
92	63½	92	63½	93¼	75	145	82	100	Transcontinental, pfd.	200	145	146¼	145	146¼	+ 1⅛
8	4½	7⅜	4¼	9⅛	4¾	6½	3½	5	Venezuelan Petrol	1,300	3½	3½	3	3¼	...
8⅛	5½	8	4¾	8¼	4¾	9⅛	4⅛	$1	Woodley Petroleum	200	4¼	4¼	4¼	4¼	...
6½	6	6	1¾	8⅜	2⅛	..	..	25	Y Oil & Gas (new)	100	1½	1½	1½	1½	...

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of New York Stock Exchange. Kennedy Building, Tulsa, Okla

1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low		Listed capital	Par value	Div. rate	Last paid	Stocks—	Sales	Week Open	ended High	August 10 Low	Last	Change
32⅞	24¼	37⅝	27⅝	43⅞	27⅛	42⅝	22½	(sh)	922,075	N.P.	50cQ	Oct. 31, 28	Amerada Corp.	6,200	27⅛	27½	25	25⅞	—1⅝
74	39⅞	82⅛	35⅛	85	51⅛	64¾	43⅛	(sh)	209,180	N.P.	.....	.....	American Republics Corp.	7,700	34⅞	38	31	32½	— ⅝
60	44¾	50¼	35	53⅜	37½	47¼	40½		$57,260,300	$25	50cQ	Dec. 31, 28	Associated Oil	200	44½	44½	44	44	— ½
128⅜	97	131⅜	104	66⅜	50	77⅛	53½		50,000,000	25	25cQ	Dec. 15, 28	Atlantic Refining	77,100	64¾	65⅞	62¼	62⅝	—3⅜
33½	23½	35½	20¾	53	20	49⅛	38⅛		35,194,000	25	50cQ	Feb. 5, 29	Barnsdall Corp.	58,700	34⅝	36⅝	33⅛	34¼	— ⅝
94½	50	96¾	65	94⅞	68	90⅞	61		20,785,400	100	.....	.....	General Asphalt	14,900	86⅞	88½	85¼	86	—2½
72	50¼	175¾	60⅛	167	79	109	70½		25,000,000	100	.....	.....	Houston Oil	3,900	74⅛	75⅜	68½	68¾	—8⅛
34	19⅝	32¾	17⅝	38⅜	21¾	39⅜	30	(sh)	959.457	N.P.	50cQ	Jan. 31, 29	Independent Oil & Gas ...	17,700	30⅜	30⅞	26⅞	29⅜	—1⅝
12¾	7½	12⅛	7⅝	39⅝	9	52⅝	20		8,203.080	$10	.....	May 31, 24	Indian Refining	35,900	44⅜	46⅛	41⅞	41⅞	—3¾
25⅞	16½	37¾	20½	39⅛	27⅜	38⅜	26	(sh)	3,992.122	N.P.	.....	May 1, 27	Lago Oil & Transport ...	1,000	31	31	29½	29½	—2½
19⅞	12	18⅛	10	19¾	9⅜	18	11¾	(sh)	1,237.078	N.P.	.....	.....	Louisiana Oil Refining ..	13,100	11	11⅜	9½	10⅛	— ⅝
28	16½	22¾	12	25½	12½	18½	12	(sh)	330.000	N.P.	.....	.....	Marnaeibo Oil	2,200	15¼	15¼	14⅞	14¾	— ⅜
63⅜	49¼	58½	31	49⅜	33	47⅛	33⅜	(sh)	2,316,692	N.P.	.....	Mar. 31, 27	Marland Oil Co.						
13¾	6	9¼	3	73	4⅝	60⅜	36¼	(sh)	945,939	N.P.	.....	Dec. 15, 20	Mexican Seaboard	22,900	38	38¾	33½	35	—3⅛
37	20½	39⅜	25½	44½	25⅛	39⅞	30½	(sh)	1.357.461	N.P.	50cQ	Feb. 15, 29	Mid-Continent Petroleum	19,500	32½	33	31	31	—1½
104½	90	105	97	120½	103¼	121	120¼		$6.718.000	$100	$1.75Q	Sept. 1, 28	Mid-Continent Pet. pfd. ..	No sales.					
2½	½	3¾	1⅝	7⅜	2⅜	5⅛	3½		24.298.850	10	.....	July 1, 23	Middle States	29.200	3¼	3¾	3	3⅛	— ½
76½	56⅛	65⅞	40⅛	54⅞	38¼	63	40¼		48.807.400	$50	.....	Oct. 20, 27	Pan American P. & T.	6,800	58¾	60¾	57⅝	58	—3⅛
78⅜	56⅞	66⅜	40¼	58⅞	37¾	66¾	40½		121,097.900	50	.....	Nov. 15, 24	Pan American P. & T. B.	103.300	59¼	60½	56¾	57⅜	—3⅞
46	30	37⅞	16¾	28⅜	15½	17½	13¾	(sh)	400.000	N.P.	.....	Jan. 30, 27	Pan American Western B	21.000	14	14	13⅝	13¾	...
32	4½	18⅞	8	21¾	11½	15¼	9	(sh)	198.770	N.P.	.....	.....	Panhandle P. & R.	1,400	8⅛	8⅛	7⅛	7⅜	—1
99⅜	51	83	54	108	70	76	47½		$2.935.200	$100	.....	July 2, 23	Panhandle P. & R. pfd. ..	No sales.					
57⅜	40	60¼	36¼	53⅞	35¼	47	35⅛	(sh)	2.406.796	N.P.	37½cQ	Jan. 2, 29	Phillips Petroleum	8,500	35⅝	36¼	35⅛	35½	—1⅜
....	....	1⅛	½	5¼	½	3⅜	2		$29.622.925	$25	.....	.....	Pierce Oil Corp.	5.000	1⅞	1⅞	1½	1⅝	— ¼
7	2¼	5½	2½	7	3½	5⅞	4	(sh)	2,500.000	N.P.	.....	.....	Pierce Petroleum	2,800	4¾	4¾	4½	4½	— ⅝
60¼	48	55½	45⅝	68	46	65⅝	53¼		60,000.000	25	.....	Aug. 31, 27	Prairie Oil & Gas	11.200	51	51⅜	50⅜	50⅝	— ½
137½	122½	190	130⅜	280	172	61⅞	53⅝		$101.250.000	$25	75cQ*	Mar. 31, 29	Prairie Pipe	5,800	60⅞	60⅞	59	60	...
20¾	11	33⅞	16¾	29⅞	16	25⅞	17		$37.450.850	$50	.....	Sept. 15, 23	Producers & Refiners	2,100	15½	15¾	11½	14	—1¼
41¾	30¾	50	36⅞	49⅝	41	46¾	38¼		2.845.350	50	.....	May 1, 25	Producers & Refiners pfd.	11,000	36¼	37½	34	36	+ 1½
31	25⅛	33½	25	31⅝	19	30¾	23¼		75.959.350	25	25cQ	Dec. 1, 28	Pure Oil Co.	2,200	25⅜	25½	24¼	24⅝	— ¼
27½	22	28⅝	25⅜	56	23	49⅝	39¾		47,025,000	$25	50cQ*	Nov. 15, 28	Richfield Oil	10.200	39¾	40	38¾	38⅞	—1
57⅜	47⅜	54½	44¼	64	44⅝	55¾	49⅞	(sh)	611,303	13.40	50cQ	Jan. 10, 29	Royal Dutch, N. Y., sh. ..	2.100	51	52⅛	50⅝	50½	— ½
48⅝	40½	47⅞	41⅜	57½	40⅝	55¾	43⅞	(sh)	£30.000,000	£1	$1.45	July 23, 28	Shell Transport & T.	No sales.					
31	24	31¾	24⅝	39¼	23¼	31⅜	25¾	(sh)	20.000.000	N.P.	35cQ	Dec. 31, 28	Shell Union Oil	51.100	26⅛	26⅞	25	25½	— ½
25⅝	15⅛	26⅜	14¼	27¼	18⅛	39⅜	18⅛		$8.357.000	$10	10cQ	Dec. 15, 28	Simms Petroleum	21.100	33½	34⅞	32¾	33¼	— ⅝
24⅞	16¾	22⅜	15	46¾	17⅜	45	35⅛	(sh)	4.501.915	N.P.	.....	.....	Sinclair Consolidated	87,700	33¾	34	31½	32½	— ⅛
99½	90	104½	97	110	102½	111	107		$16,604.600	$100	$2Q	Nov. 15, 28	Sinclair Consolidated pfd.	No sales.					
37⅛	26⅝	37⅜	24⅛	42⅝	25	46½	32⅞		27.396.590	25	50cQ	Dec. 15, 28	Skelly Oil Co.	18.800	40⅛	41	38⅜	40	— ½
63⅝	51½	60¾	50⅜	80	53	81⅞	64	(sh)	12.594.098	N.P.	65½cQ	Dec. 15, 28	Standard Oil of Cal.	76 200	70⅞	71¾	69¼	70½	— ½
46⅜	37½	41⅜	35⅛	59⅜	37¾	62⅜	48		$611.120.700	$25	25cQ*	Dec. 15, 28	Standard Oil of N. J.	20 500	57	57⅞	56⅛	56⅜	— ½
47¼	30⅜	34⅛	29¾	44¼	28¾	45¾	38		427.973.275	25	40cQ	Dec. 15, 28	Standard Oil of N. Y.	24.300	38½	39¼	37⅝	37⅝	— ⅞
41¾	30⅛	34⅞	30	77	31½	76⅝	57	(sh)	1,206.073	N.P.	25cQ	Dec. 15, 28	Sun Oil	1.100	70¼	72	70	70⅞	—1⅛
5¼	1	6½	3⅛	14¼	2½	12	7	(sh)	1.267.000	N.P.	.....	Dec. 20, 20	Superior Oil Corp.	20 300	7⅝	6¾	6	6⅛	— ⅝
58	48	58	45	74⅜	50	68½	57¼		$211.076.650	$25	75cQ	Jan. 1, 29	The Texas Corporation ..	28.300	61⅜	61¾	59¾	60	—1⅜
19½	12	18⅞	12	26⅝	12⅛	23⅞	16		8.380.340	10	.....	Jan. 3, 28	Texas Pacific Coal & Oil .	20,100	15⅝	17⅜	15⅛	16½	+ ½
39¼	27	29⅛	19	41½	19⅝	40	27⅛	(sh)	2.168.410	N.P.	20cQ	Dec. 15, 28	Tide Water Oil Co.	900	34	34	32¼	32¼	—2¼
103	87¼	90⅛	85	100⅛	86	97½	90⅛		$20.705.200	$100	65½cQ	Dec. 15, 28	Tide Wat. O. Co. 5% pfd.	2,100	92	92	90⅞	90⅞	—1⅝
27	20⅞	19⅛	15⅜	25	14⅜	23½	17½	(sh)	4.796.158	N.P.	.....	Aug. 1, 27	Tide Water Associated ...	20 900	18½	18⅞	17⅞	17⅞	— ⅝
5½	3	10⅜	3¾	14¾	7¼	14¼	9	(sh)	3.742.029	N.P.	.....	.....	Transcontinental Oil	161.400	11⅝	12¼	11	11¼	— ¼
58⅜	37¼	56½	39⅝	58	42⅝	54½	46		$94.798.100	$25	50cQ	Nov. 10, 28	Union Oil of California ..	5 800	46⅝	47¼	45½	45⅜	—1½
120⅜	84¼	127½	94	128⅛	110	150¼	121⅞		31,061.200	100	$1.25Q	Dec. 1. 28	Union Tank Car Co.	3 200	149½	157½	149	150	+ 2
30⅛	23⅛	34½	24½	44⅞	26	42⅞	28½	(sh)	356.000	N.P.	50cQ	Jan. 2, 29	Warner Quinlan	5.500	30	30⅜	29¼	29⅝	— ⅝
29¾	25⅛	27½	20	38	20⅛	38	30¼	(sh)	490,000	N.P.	50cQ	Jan. 20, 29	White Eagle Oil & Refg. .	2 400	32½	33	32½	32½	— ¾
....	....	....	....	....	....	29¾	18⅛		.....	....	.....	.....	Wilcox Oil & Gas	1.100	19¼	20	18⅝	18⅝	— ⅜

*Also extras. †Ex-dividend.

STANDARD OIL STOCKS ON NEW YORK CURB

21	16	21⅝	17⅞	22⅜	14⅞	18¾	14		£4,126.460	£1	.....	June 6, 28	Anglo-American Oil	500	13	15	13	13	—1¾
....	....	3¾	¾	5	1¼	2½	1⅛	(sh)	500.000	N.P.	.....	.....	Atlantic Lobos	No sales.					
76	65	69	50	56½	44½	46½	35		1.000.000	25	$1S.A.	Oct. 15, 28	Borne Scrymser	250	30½	30½	28¼	28¼	—2¼
59½	42	60	45	76	53	74¼	65¼		10.000.000	50	$1Q	Dec. 15, 28	Buckeye Pipe Line	200	69	69	69	69	...
82½	65	126	76½	161	117	193⅜	140⅛		3.000.000	25½	$1Q	Dec. 28, 28	Chesebrough Mfg.	200	177¼	184¾	177¼	184¾	...
25⅞	17½	22⅝	16¼	23	16	29	17¼		36,057.840	10	.....	Dec. 15, 27	Continental Oil	8,100	17⅜	17¾	17	17⅛	— ¼
137	102	137	89	114	67	75¾	60		1.500.000	50	$1A	Dec. 15, 28	Cumberland Pipe Line ...	150	64	66¾	63	66¾	...
63¾	43	68⅛	47	88	64⅛	70⅛	59⅛		5,000.000	100	$1Q	Nov. 1, 28	Eureka Pipe Line	50	59	59	59	59	...
32½	9⅞	13½	3½	13	4¼	6⅝	5⅞		16.000.000	100	.....	June 30, 25	Galena Signal Oil	No sales.					
68½	52	68½	54	114¾	59¼	126⅞	89⅝		73,117.577	25	30cQ*	Jan. 1. 29	Humble Oil & Refining ...	5,300	119	119	114¼	116½	— 3
144½	125½	182	123¾	290½	176½	340½	290		20.000	100	10%S.A.	Dec. 15. 28	Illinois Pipe Line	400	305	305	300¼	300¼	— 4
....	....	64¾	37¾	104	56¾	30⅜	26⅝	(sh)	6.458.267	N.P.	25cQ	Dec. 1, 28	Imperial of Canada	8,500	29¼	29⅜	28¼	28⅜	— ⅛
72½	58	94½	61	91⅞	74⅜	28⅜	26¾		$5.000.000	$50	.....	Feb. 15, 29	Indiana Pipe Line (new).	600	28½	28⅝	28	28	— ½
35½	28¾	39	28¼	55	35	30⅜	22½	(sh)	7.123.144	N.P.	37½c	Nov. 30, 28	International Pet. (new) .	7,100	25	25⅞	24	24	—1
20¾	12½	24	13½	32⅜	19⅜	25⅞	21⅜		$6.363.350	12.50	25c	Dec. 15, 28	National Transit Co.	900	22¼	22¼	22	22¼	— ⅛
51½	27¼	44½	31¼	75	38½	85	70		5,000.000	100	.....	July 15, 26	New York Transit	300	15¼	15¼	15¼	15¼	...
80½	64	100	70	69	56½	63	52¾		2.000.000	50	$3S.A.	Jan. 2. 29	Northern Pipe Line	100	57	57	57	57	...
67¾	55¾	67⅞	52	84	58½	75⅜	64⅛		60,000.000	25	50cQ*	Dec. 15, 28	Ohio Oil Co.	2,503	70⅛	70⅛	67½	69½	— ½
24⅜	15	39	12	84	28	44½	23⅛		10.000.000	25	$1.25	Dec. 15, 28	Penn Mex. Fuel	100	33	33	33	33	+ 1⅜
220	84½	201½	175½	220	167	219½	200		4,000,000	100	$5S.A.	Dec. 20, 28	Solar Refining (old)	100	37⅞	37⅞	37⅞	37⅞	...
....	....	....	....	....	....	50	37¾		.....	....	.....	.....	Solar Refining (new)						
74½	61½	27¼	15½	19	15	22½	13		1.000.000	10	$2	Dec. 1, 27	Southern Pipe Line	100	21¼	21¼	21¼	21¼	+ ¼
50	34½	41½	35	71⅞	36¾	69⅞	62		2,000,000	25	50cQ	Dec. 31, 28	South Penn Oil (old)	2,100	50	50	46¼	46¼	—3¾
....	....	....	....	....	....	60¼	40⅜		.....	....	.....	.....	South Penn Oil (new) ...						
56	47½	83	55½	102	70	70	62¾		3.500.000	100	$1Q	Oct. 1, 28	Southwest Pa. Pipe Lines.	150	63	64	63	64	...
70½	60½	81½	64⅝	95⅞	70⅞	63	54		228,415.463	25	61½Q	Dec. 15, 28	Standard Oil of Indiana ..	23,000	54	55⅜	51½	51⅜	—3⅛
36½	16½	20⅞	14⅝	37¾	15	22⅛	18		8.000.000	25	.....	June 16, 24	Standard Oil of Kansas ..	2.200	20½	22⅛	20⅜	22	+ 1½
134⅜	108	130	111½	179¾	122¼	45¼	35⅛		17.012.559	10	$1Q	Dec. 31, 28	Standard Oil of Kentucky.	5.900	36⅝	36⅞	35	35⅞	—1
51⅛	42	49½	40	54⅞	39⅞	50¼	45½		4.559.850	25	63cQ	Dec. 20, 28	Standard Oil of Nebraska.	500	49½	49½	49	49½	...
372	288	87½	72	134	71	129	110¼		14.000.000	25	62½cQ	Jan. 2, 29	Standard Oil of Ohio	350	117	117	116½	117	
21	15	21	14½	23½	16	18	15		861.000	25	.....	Nov . 1, 19	Swan Finch Co.	No sales.					
109⅜	90¼	....	....	111	72	133¾	105½		125,619.000	25	75cQ	Dec. 20, 28	Vacuum Oil Co.	2.400	120⅛	120⅛	115⅛	116	—4

*Also extras.

Colorado, have meetings in one of these States. The Mid-Continent Association covers only Oklahoma and Kansas.

VENEZUELA PRODUCTION

NEW YORK, Aug. 12.—Venezuelan Oil Concessions, Ltd., reports for the week ended July 27 production of 123,927 metric tons of crude oil, an average of 17,704 tons, against 122,847 tons, or 17,500 tons daily, in the previous week. A metric ton is equal to approximately 7½ bbls.

WELL TRAINED FIELD MAN AID TO PLANT OPERATION

(Continued from Page 139)

in the same sense, in order for a gasoline plant to operate successfully, it must have an abundance of gas. Therefore the importance of this position is founded on the ability of keeping a plant supplied with the richest gas and a good "load" at all times, being ever watchful of the interests of the company, in so far as this pertains to competitors, producers and operators.

NEW FIELD OPEN FOR SCIENTIST AND ENGINEER

(Continued from Page 38)

from 20 to 25 per cent. The results from the core analysis proved that the water was moving through the highly permeable 20-to-25-per cent-porosity sand without affecting the less porous but equally well saturated pay in the upper part of the sand.

To Obtain Uniform Flood

The problem encountered was to try to develop a method for making the water move through the beds of low permeability. It was quite evident that as long as there was an outlet the water would move only through the high-porosity sand, and owing to the relatively thin section of this stratum it seemed uneconomical to flood it separately although it was desired not to sacrifice its oil content if it were possible to flood both types of sand at one time. It was therefore decided to drill an experimental five-spot flood south of the first five-spot, which would not be in any way affected by the first flood and to delay the drilling of the oil wells for a period after the water had been let into the sand which was to be determined from a study of a second core taken from well No. 32.

The idea of delaying the drilling of the oil wells in a five-spot flood is based upon the fact that the sand body in the five-spot square possesses a definite and fixed capacity to hold fluid. If the high porosity pay in the lower part of the sand were completely saturated with oil and water, that is, its capacity to hold fluid attained, and if the intake wells were forced to continue taking water by the application of additional pressure the water would obviously have to start moving through the lower porosity sand. This method is naturally restricted to a flooding pattern in which the oil well is entirely surrounded by water intakes. It could hardly be applied to a line or circle flood because in floods of that character the area of water movement cannot be accurately established or controlled. It was calculated from the core of well No. 32 that it would require about 4,000 bbls. of water per acre, or approximately 8,000 bbls. for a 300-foot five-spot to completely saturate the high porosity sand with fluid. It was found that the wells would take on the average about 200 bbls. of water a day with a pressure at the top of the sand of 600 pounds per square inch and allowing that one-quarter of this water was moving into the five-spot square from each well it was calculated that it would require about 40 days to completely saturate the high porosity sand. For about 30 days the water intake wells gulped water in large volumes but at the end of a month there was a decided dimunition in water intake and 45 days after the water was turned in the intake wells were averaging about 30 bbls. of water apiece each day. Much of this water was probably moving away from the five-spot into unrestricted areas so the pressure at the top of the sand was gradually advanced to 1,400 pounds. By slowly increasing the pressure a flow of about 70 bbls. a day was maintained through each intake well. It was determined at this rate of intake that it would require about three months to saturate the low-porosity sand. The water was turned in on all wells on September 15 and the first oil well of the second five-spot was drilled on February 1, 1929. The average daily production of this well makes a most striking contrast with the average daily production of the wells in the first five-spot. The completion of the second well on the second five-spot was delayed until April 26 by a bad fishing job. The average daily production of this well for the month of May was 26 bbls. of oil, and for June 24 bbls. of oil. Up to the present time no water has appeared in this well.

Results of Two Methods

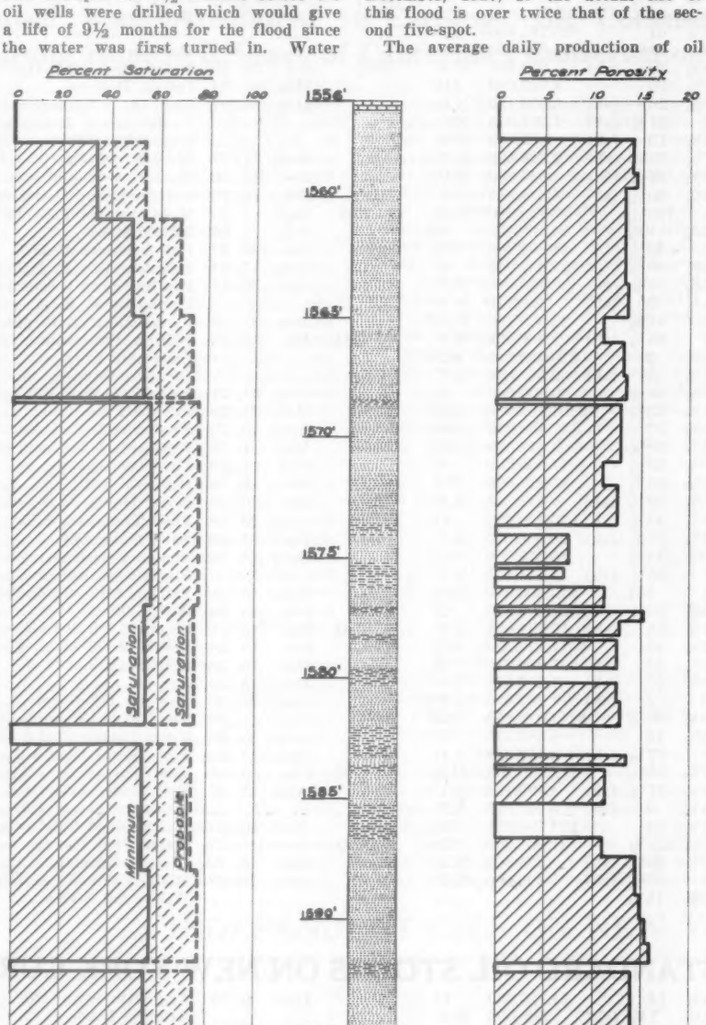
The following table makes it possible to compare the two methods:

	Length of Productive life up to June, 1929 (months)	Area of five-spot (A)	Oil Recovery from five-spot well total (bbls.)	Recovery per acre (bbls.)	Water production from five-spot well total (bbls.)
1st 5-spot	16	1.43	1,660.1	1,090.9	1,881.4
2nd 5-spot	5	2.06	4,079.1	1,980.1	390.0

It should be remembered that the water was going into the sand in the second five-spot for 4½ months before the oil wells were drilled which would give a life of 9½ months for the flood since the water was first turned in. Water has been going into the sand in some of the wells of the first five-spot flood since December, 1927, so the actual life of this flood is over twice that of the second five-spot.

The average daily production of oil from the wells in the first five-spot has been rapidly declining during 1929. At the present rate of decline in oil production and increase in water production they will probably reach their economic limit within four or five months. The total recovery from the first five-spot flood will hardly exceed 1,400 bbls. per acre. The actual oil content of the high porosity sand in the first core well was 3,900 bbls. per acre and applying a recovery factor of 40 per cent the indicated recovery from this stratum is 1,560 bbls. per acre. The second 5-spot flood produced 44 per cent more oil in one-third of the productive period of the first five-spot.

The delayed drilling experiment has not yet reached a point where ultimate recovery per acre can be calculated but according to Torrey it seems likely it will produce in excess of 5,000 bbls. per acre. The indicated recovery from the analysis of the core from well No. 32 is 5,600 bbls. per acre. Even if this recovery is not attained it seems quite certain that a previously unsatisfactory property is being made into a profitable investment by the application of this method and there seems to be no reason why it cannot be used with equally successful results in other areas where similar conditions occur.



Porosity and saturation profiles of core recently taken on one of the properties of the Bradford Producing Co., Inc., an associated company of the Sloan & Zook Co., in the Bradford Field.

Five Spotting in Its Infancy

The history of flooding in the Bradford and Allegany Fields has been one of experiments and rapid changes from system to system. The first successful five-spot operation was conducted by the Messer Oil Co. in 1927, but it was first attempted in 1924 by the Associated Producers Co. Frank Haskell, formerly of Tulsa, is credited with the idea. It was not a success with the Associated because the four intake wells were spaced too far apart and therefore too far from the center oil well. Later when the Messer Oil Co.'s five spotting was a demonstrated success the Associated Producers drilled the water wells closer together on the property where the first test had been made and it was a success.

Five spotting is in its infancy. It is said that not over 2 per cent of the big field is being operated in this way. As a matter of fact much of the Bradford Field has not been tested by flooding operations of any kind. Flood tests have been started on about half of the 85,000 acres in the field.

As most of the floods are circle or line floods which move the water very slowly the life of the field is not threatened by the amount of five-spotting that has already been done. Homer G. Barcroft, one of the most efficient production men in the Bradford Field, is of the opinion that it will take 100 years to extract all the recoverable oil from the field by whatever methods are known at present. Of course, if five-spotting were to become general the end of the field would be greatly hastened, but operating by the five-spot method with its attendant expense of big engines, pumps, compressors, water lines and water tanks, filtration systems, etc., means a development expenditure as high as $7,000 per acre. Most of the lease owners in the Bradford Field seem content at this time to continue the slower and less expensive way of flooding. They are getting a return which was undreamed of 20 years ago and they feel there is no reason to rush matters. These conservative operators are in an enviable position. The value of their leases has steadily increased and now runs all the way from $2,000 to $5,000 per acre, depending on location.

Calculating Recovery

As has often been pointed out in The Oil and Gas Journal operating in the Bradford and Allegany Fields is not a hazard. Dry holes are practically unknown. It is now possible by means of core analysis to set down with reasonable exactness the volume of recoverable oil on a property; then to determine the cost of recovering it. The only element of uncertainty is the market price of oil and in figuring on this an average price covering a period of time is used. The rapidly growing demand for Pennsylvania grade oil by refiners has given Bradford-

Allegany operators a confidence in an ample future market price, and this confidence is reflected by the steadily growing sums the large operators are willing to pay for leases. It is hard for a western oil producer to believe that a property which has been under drainage for from 40 to 50 years can still be worth $5,000 an acre, or even half that sum, but the peculiar conditions in the Bradford-Allegany district make it possible.

In the beginning of this article it is said that the development of the Bradford-Allegany Field is becoming more and more a problem of the engineer and scientist. Everything that is new is regarded as experimental. There is a fine spirit of co-operation among the producers as they have in the past found that they can all learn something from the experience of the others. Even the costly equipment used in the rapid depletion of a property by means of five-spot flooding under applied pressure is experimental. One young producer who has installed a $30,000 pressure plant is wondering whether or not he has a plant sufficient for his purpose. He is one of those who built in one big unit. Some operators with no more acreage have built their plants in several smaller units so that they may add to them if they are found insufficient. The question of how much pressure may be used economically is bothering oil men. It is expected that pressures will be increased to a high point and some operators look for a maximum of 5,000 pounds. All these problems which are disturbing to the minds of the producers, most of whom are practical laymen, are subjects on which the engineer, the chemist and the physicist can be of assistance, working in conjunction with these practical oil men.

COMMITTEES TO APPLY CODE ARE SELECTED

(Continued from Page 42)

cock Oil Co., Minneapolis, Minn.; Frank J. Norris, Pure Oil Co., Minneapolis. Minn.; R. B. Bergland, Buffalo Oil & Gas Co., Moorehead, Minn.; A. P. McGrath, Skelly Oil Co., St. Paul, Minn.; C. A. Rehder, Peerless Oil Co., Cannon Falls, Minn.; J. M. Wolf, Southern Minnesota Oil Co., Fairmount, Minn.; W. H. Edgar, Lake Oil Co., Inc., Devils Lake, N. D.; H. M. Wilson, International Oil Co., Minot, N. D.; R. J. Coughlin, Westland Oil Co., Minot, N. D.; H. H. Hathaway, Standard Oil Co of Indiana, Fargo, N. D.; A. C. Foster, Oakes, N. D.; J. P. Deegan, Northwestern Oil Co., Superior, Wis.

Sub Committee (Michigan)—Chairman: H. H. Ragle, Michigan Oil Mens Assn., Jackson; W. A. Garvey, Michigan Oil Mens Assn., Jackson; John K. Willard, Cities Service Co., Detroit; Thos. H. B. Van Keuren, Wilson Oil Corp., Detroit; M. L. Newhall, Sun Oil Co., Detroit; R. F. McConnell, Standard Oil Co. of Indiana, Detroit; C. B. White, Vacuum Oil Co., Detroit; C. A. Shierson, Mutual Oil Co., Adrian; F. H. Emig, Cardinal Petroleum Co., Muskegon; J. C. Schindehette, Saginaw Oil Co., Saginaw; Horatio Abbott, Abbott Gasoline Co., Ann Arbor; C. E. Rennie, Rennie Oil Co., Traverse City; J. W. Gehrken, Monroe Co-Operative Oil Co., Monroe; J. J. Thieson, Thieson Clemons Co., St. Joseph; J. J. Swarthout, Gratiot County Oil Co., Alma.

Sub Committee (South Dakota)—Chairman: F. H. Buehler, Dacotah Oil Co., Madison; H. F. Brownell, Brownell Corp., Sioux Falls; J. J. Johns, Johns Oil Co., De Smet; Wm. Graham, Hi Grade Oil Co., Groton; A. J. Baldwin, Baldwin Oil Supply Co., Lake Preston; A. W. Reynolds, Reynolds Oil Co., Canton.

Sub Committee (Illinois)—Chairman: P. D. Sweney, Sweney Gasoline & Oil Co., Peoria; C. A. Beach, Empire Oil & Ref. Co., Chicago; C. O. Beroth, Acme Petroleum Co., Chicago; W. J. Herr, Mid-Continent Petroleum Corp., Chicago; B. L. Majewski, Shaffer Oil & Refining Co., Chicago; A. S. Rosenthal, Apex Motor Fuel Co., Chicago; A. H. Sus, Sinclair Refining Co., Chicago; S. L. Dunaway, Mitchell Oil & Gas Co., Marion; E. Huot, Baron Huot Oil Co., Kankakee; H. B. O'Hair, H. B. O'Hair Oil Co., Mattoon; J. G. Sinclair, Shell Petroleum Corp., Decatur; A. H. White, Indian Refining Co., Lawrenceville; G. A. Primm, Illinois Petroleum Marketers Assn.; Springfield; C. F. Eberle, Standard Oil Co. of Indiana, Springfield; W. T. Leverenze, Danville; Harvey Richardson, Richardson Lubricating Co., Quincy; E. E. Smith, Smith Oil & Refining Co., Rockford; E. P. Welch, Illinois Oil Co., Rock Island; E. R. Kennedy, Illinois Petroleum Marketers Assn., Galesburg; W. C. Brubaker, Kanotex Refining Co., Bloomington; A. L. Streigal, The Texas Company, Morris.

Sub Committee (Missouri)—Chairman: W. T. Atkins, Skelly Oil Co., Kansas City; George S. Allee, Missouri Oil Mens Assn., Kansas City; R. F. Merring, White Eagle Oil & Refining Co., Kansas City; Harry Deming, Pierce Oil Co., St. Louis; J. A. Strong, Shell Petroleum Corp., St. Louis; Wallace Smith, Macon; W. R. McCain, Purity Oil Co., Springfield.

Sub Committee (Nebraska)—Chairman: Chas. M. Sutherland, Nebraska Ind. Oil Mens Assn., Lincoln; J. A. Lentz, Continental Oil Co., Lincoln; O. J. Shaw, Dixie Distributors, Inc., Lincoln; C. N. Humphrey, Standard Oil Co. of Nebraska, Omaha; G. A. Steele, Independent Oil & Gas Co., Omaha; F. W. Callanan, Shaffer Oil & Refining Co., Omaha, T. H. J. Weigand, National Refining Co., Omaha; M. S. Lackey, Sinclair Oil Co., Omaha; Stockton Heth, Nicholas Oil Corp., Omaha; Morris Wilder, W.-S. Oil Works, Omaha; S. A. Wassum, Nebraska Ind. Oil Mens Assn., Tekomah; W. T. Atkins, Skelly Oil Co., Kansas City, Mo.

Sub Committee (Iowa)—Chairman: James M. Cushman, International Oil Co., Des Moines; M. L. Long, Iowa Petroleum Co., Des Moines; Harry Monson, Standard Oil Co. of Indiana, Des Moines; H. E. Wormhoudt, Independent Oil & Gas Co., Des Moines; C. M. Swanson, Sinclair Refining Co., Des Moines; Tom Meece, Phillips Petroleum Co., Des Moines; T. W. Morris, Texas Oil Co., Des Moines; A. L. Lommel, Bartles Shepard Oil Co., Waterloo; D. C. Wixon, Mid-Continent Petroleum Corp., Waterloo; H. C. Meier, Penn Consumers Oil Co., Council Bluffs; William Brown, Iowa Oil Co., Dubuque; Leonard Simmer, Wapollo Oil Co., Ottumwa; Homer Coppack, Farmers Oil Co., Shenandoah; J. O. Corner, Transcontinental Oil Co., Sioux City; J. C. Becker, Big Four Oil Co., Sheldon; F. W. Loring, Cities Service Co., Cedar Rapids; Z. C. Reddish, Shell Petroleum Corp., Moline, Ill.

Eastern Division

(Maine, New Hampshire, Rhode Island, New York, Pennsylvania, Maryland, Virginia, Tennessee, Mississippi, Alabama, Florida, Vermont, Massachuse ts, Connecticut, New Jersey, Delaware, West Virginia, Kentucky, North Carolina, South Carolina, Georgia and the District of Columbia.)

Regional Committee—Chairman: Ralph C. Holmes, The Texas Company, New York; W. C. Teagle, Standard Oil Co. of New Jersey, New York; E. W. Sinclair, Sinclair Consolidated Oil Corp., New York; Axtell J. Byles, Tide Water Associated Oil Co., New York; C. F. Meyer, Standard Oil Co. of New York, New York; Frank Coates, Henry L. Doherty, Co., New York; R. G. Stewart, Pan American Petroleum & Transportation Co., New York; Edward Prizer, Vacuum Oil Co., New York; Geo. S. Davidson, Gulf Refining Co., Pittsburgh; J. Howard Pew, Sun Oil Co., Philadelphia; W. M. Irish, Atlantic Refining Co., Philadelphia; E. M. Lyons, Tiona Refining Co., Philadelphia; W. E. Smith, Standard Oil Co. of Kentucky, Louisville; Charles L. Suhr, Pennzoil Co., Oil City; Richard B. Kahle, Beacon Oil Co., Everett.

Sub Committee (Maine)—Chairman: Theo. E. Emery, Maine Independent Oil Dealers Assn., Gardiner; W. H. Whelpley, Standard Oil Co. of New York, Portland; Carl Shaw, Gulf Refining Co., Portland; T. Walsh, The Texas Company, ,Portland; Walter C. Kowalski Vavoline Oil Co., Portland; W. H. Schofield, Tide Water Oil Co., Portland; H. G. Perkins, Shell Eastern Petroleum Co., Bangor; Irving L. Carver, Maine Independent Oil Dealers Assn., Bethel.

Sub Committee (New Hampshire)—Chairman: J. P. McHugh, The Texas Company, Boston, Mass.; W. S. Folant, Standard Oil Co. of New York, Boston, Mass.; W. V. C. Bulkeley, Gulf Refining Co., Boston, Mass.; ——— Precore, Manchester Coal & Ice Co., Manchester, N. H.; W. S. Scott, Tide Water Oil Co.; Manchester, N. H.; John E. Holden, Shell Eastern Petroleum Co., Manchester, N. H.

Sub Committee (Rhode Island)—Chairman: W. S. Folant, Standard Oil Co. of New York, Boston, Mass.; F. R. Curry, The Texas Company, Providence, R. I.; C. H. Morehouse, Atlantic Refining Co., Providence, ,R. I.; C. L. Dickson, Sun Oil Co., Providence, R. I.; Clinton Lamsen, Lamsen Oil Co., Providence, R. I.

Sub Committee (New York—Except Metropolitan New York, Long Island and Westchester County)—Chairman: H. A. Howard, S andard Oil Co. of New York, Buffalo; E. A. Goetz, Beacon Oil Co., Syracuse; H. H. Wende, Goodyear-Wende Oil Co., Buffalo; John Harper, Tide Water Oil Co., Buffalo; J. A. Rose, Gulf Refining Co., New York; W. L. Kallman, The Texas Company, New York; J. M. Woodruff, Sinclair Refining Co., New York.

Sub Committee (Metropolitan New York, Long Island and Westchester County)—Chairman: Frederick Ewing, Standard Oil Co. of New York, New York; Robert Calder, Kesbec Oil Co., New York; W. R. Elwood, The Texas Company, New York; Harry H. Fuller, Sinclair Refining Co., New York; E. L. Shea, Tide Water Oil Co., New York; C. G. Pepoon, Pure Oil Co., New York; E. A. Lyons, Gulf Refining Co., New York.

Sub Committee (Pennsylvania)—Chairman: R. D. Leonard, Atlantic Refining Co., Philadelphia; Samuel Eckert, Sun Oil Co., Philadelphia; A. M. McBurney, Crew Levick Co., Philadelphia; R. A. Overholser, Pennsylvania Ind. Oil Mens Assn., Harrisburg; M. V. Hartman, Gulf Refining Co., Pittsburgh; Sam Cohen, Independent Oil Co., Altoona; R. B. Phillips, Pacific Gas & Oil Co., Scranton.

Sub Committee (Maryland and the District of Columbia)—Chairman: J. W. Warner, Tide Water Oil Co., Baltimore.

(Members sub committee not yet reported.)

Sub Committee (Virginia)—Chairman: L. T. Bass, The Texas Company, Norfolk; J. M. Graves, Standard Oil Co. of New Jersey, Richmond; W. A. Stokely, Continental Oil Co., Richmond; M. B. Whiting, Virginia Independent Oil Mens Assn., Clifton Forge; R. E. Cross, Tide Water Oil Co., Baltimore.

Sub Committee (Tennessee)—Chairman: Mark Senter, Southeastern Oil Co., Chattanooga; C. J. Guzzo, Gulf Refining Co., Knoxville; F. C. Brown, The Texas Company, Knoxville; G. B. Dickey, Apex Oil Corp., Nashville; J. M. Lassing, Peerless Oil & Gas Co., Nashville; B. E. Holman, Elk Oil Co., Fayetteville; E. E. Johnson, Columbia Oil Co., Columbia; W. D. Hudson, Clarksville Oil Co., Clarksville; C. L. Williss, Standard Oil Co. of Louisiana, Memphis.

Sub Committee (Mississippi)—Chairman: H. B. Dodson, Standard Oil Co. of Kentucky, Jackson.

(Members of sub committee not yet reported.)

Sub Committee (Alabama)—Chairman: D. H. Bohler, Standard Oil Co. of Kentucky, Birmingham.

(Members of sub committee not yet reported.)

Sub Committee (Florida)—Chairman: John Downing, Standard Oil Co. of Kentucky, Jacksonville.

(Members of sub committee not yet reported.)

Sub Committee (Vermont)—Chairman: J. A. Maddocks, Gulf Refining Co., Boston, Mass.; J. C. Richdale, Jr., Beacon Oil Co., Boston, Mass.; Geo. H. Stewart, People's Fuel & Supply Co., Barre. Vt.; F. M. Dow, The Texas Co., Burlington, Vt.; Geo. A. Perryman, Standard Oil Co. of New York, Albany, N. Y.

Sub Committee (Massachusetts)—Chairman: C. B. Jones, Standard Oil Co. of New York, Boston; C. S. Jenney, Jenney Manufacturing Co., Boston.; J. K. Skillings, The Texas Company, Boston; J. A. Maddocks, Gulf Refining Co., Boston; P. R. Everson, Shell Eastern Petroleum Products, Inc., Boston; P. A. Brewer, 120 Brookline St., Cambridge; A. R. Tattersall, Independent Oil Mens Assn. of N. E., Worcester; J. C. Richdale, Jr., Beacon Oil Co., Everett.

Sub Committee (Connecticut)—Chairman: Frederick F. Hale, Beacon Oil Co., Everett.

(Members of sub committee not yet reported.)

Sub Committee (New Jersey)—Chairman: J. E. Skehan, Standard Oil Co. of New Jersey, Newark; Wm. Haas, Reliable Gas & Oil Co., Newark; L. W. Sweet, Tide Water Oil Sales Corp., Newark; E. A. Willse, Standard Oil Co of New Jersey, Newark; E. H. O'Hara, Gulf Refining Co., New York; J. M. Williamson, The Texas Company, New York; F. J. Coffin, Sun Oil Co., New York; A. M. McBurney, Crew Levick Co., Philadelphia.

Sub Committee (Delaware)—Chairman: R. D. Leonard, Atlantic Refining Co., Philadelphia; R. E. Garrett, Gulf Refining Co., Philadelphia; C. P. Cox, Sun Oil Co., Philadelphia; C. Malcolm, The Pure Oil Co., Marcus Hook; W. F. Carroll, Old Time Petroleum Co., Wilmington; Geo. W. Phillips, Pittsburgh Independent Oil Co., Wilmington.

Sub Committee (West Virginia)—Chairman: Crittendon Ford, Standard Oil Co. of New Jersey, Charleston.

(Members of sub committee not yet reported.)

Sub Committee (Kentucky—No sub committee yet reported.)

Sub Committee (North Carolina)—Chairman: L. F. Manning, Gulf Refining Co., Raleigh; J. C. Moore, Dixie Oil Co., Raleigh; Chas. S. Wallace, Morehead City; J. B. Hughes, Wilmington Oil Co., Wilmington; W. R. Holt, Holt Oil Co., Smithfield; C. K. Boren, Central Oil Co., Greensboro; C. M. Byers, Standard Oil Co., Charlotte; J. R. Flanigan, Statesville Oil Co., Statesville; R. P. Simmons, Koon Oil Co., Asheville; J. N. Koonts, Sinclair Refining Co., Atlanta, Ga.

Sub Committee (South Carolina)—Chairman: C. R. Dillard, Sinclair Refining Co., Atlanta, Ga.

(Members sub committee not yet reported.)

Sub Committee (Georgia)—Chairman: J. S. Jones, The Texas Company, Atlanta; Wiley Moore, Wofford Oil Co., Atlanta; R. E. Hodgson, Standard Oil Co. of Kentucky, Atlanta; Guy Wilby, Gulf Refining Co., Atlanta; L. C. Ferguson, Reed Oil Co., Atlanta.

EXCESS PRODUCTION CONFINED TO COAST

(Continued from Page 37)

from 16,995,000 bbls. the first of the year to 32,667,000 bbls. on June 30.

Imports of crude oil with a total of 43,852,000 bbls. for the first six months of this year are not increasing as rapidly as they did last year. Imports of Venezuela increased from 21,949,000 bbls. to 29,862,000 bbls. Imports from other countries decreased, those of Mexico dropping from 8,346,000 bbls. the first six months of 1928 to 5,917,000 bbls. the first half of 1929. Exports of crude oil so far this year have been running exceptionally high, the increase for the first six months totaling 2,815,000 bbls., or approximately 50 per cent of the increase in imports. Approximately 85 per cent of the exports are for Canadian buyers.

Refined Products

The June report of the Bureau of Mines does not reflect any important changes in the statistical position of the major products. Gasoline consumption based on refinery shipments continues to show a phenomenal gain, the increase for the first six months being 26,041,000 bbls. over the first half of 1928.

This increase of 14.8 per cent in total demand should it continue through 1929 will mean a gasoline outlet of 437,000,000 bbls. in domestic and export markets. Most of the estimates for 1929 made at the beginning of the year were from 410,000,000 to 415,000,000 bbls. Thus the gasoline demand for this year if

the rate of increase for the first half year continues will be from 22,000,000 to 27,000,000 bbls. greater than expected. Figured on a gasoline recovery of 43 per cent this means that the crude requirements for 1929 will be approximately 50,000,000 bbls. greater than calculations made early in the year.

It is apparent that this exceptionally large increase in gasoline demand has prevented a more rapid slump in gasoline prices at refineries. The market has been weak for the past 60 days despite the heavy demand, but with a normal demand it is certain that the market would have collapsed earlier in the year.

Although gasoline stocks at refineries were reduced in excess of 3,000,000 bbls. in June the relative situation between supply and demand so far this year has made a healthy market situation impossible. The 14.8 per cent increase in total demand has been taken care of with a 18.5 per cent increase in total supply leaving a surplus supply which for the first six months totaled 8,395,000 bbls. Last year with the market advancing in the late spring and summer season the excess supply for the first half of the year was 1,546,000 bbls.

In gasoline as well as crude oil production, the California operations have been outstanding so far this year. As an illustration of this situation the June output of gasoline in 1929 and 1928 are of interest. For the entire refining industry in the United States exclusive of California the June, 1929, gasoline output was 12.6 per cent greater than the same month last year. In contrast the California output increased 31.7 per cent. The California output in June accounted for 35.8 per cent of the increase over June of last year.

A study of refinery operations for the first half year shows that practically all of the excess gasoline supply over demand can be accounted for by California refinery operations. Due to the large supply of crude oil available the California refiners have increased their crude oil runs to stills. The new crude oil supply is higher in gravity than the old and this has meant a substantial increase in gasoline recovery per barrel of crude throughput. The gasoline recovery in California for June, including the natural gasoline blended at refineries, averaged 35.8 per cent. This compares with a yield of 31.1 per cent in June of last year. The increased yield of California refineries largely accounts for increase in yields for the entire United States. For the first six months this yield, including natural gasoline blended at refineries, was 42.9 per cent. Last year the yield for the first six months was 40.3 per cent.

Kerosene

The kerosene demand for the first six months was 1.2 per cent less than for the same period in 1928. The total supply, however, was 5.8 per cent less than last year so that the relative situation between supply and demand so far this year has been better than any other major product secured from crude oil.

Exports which constitute about 33 per cent of the total kerosene demand in this country declined 9.3 per cent the first half of this year. This was to a large extent offset by an increase of 3.9 per cent in the domestic demand. With a decrease of 5.8 per cent in the total supply the demand exceeded the supply by 653,000 bbls. the first half of this year and that quantity of material has been withdrawn from storage since the first of the year. Last year for the same period the supply exceeded the demand by 717,000 bbls.

The fact that increasing quantities of west Texas and other similar grades of crude oils are being refined and the larger yields of gasoline with modern refinery equipment is helping maintain a favorable kerosene market. It is difficult to secure specification kerosene from some of the new crudes which have been available in the past two years. This is due to the distillation range of the crude oil and also the presence of sulphur compounds. Some refiners do not attempt to secure any kerosene from these crudes and the yields of other refiners are small. Modern fractionating equipment permits a close cut between the kerosene and gasoline streams and this has tended to reduce the yields of the former.

This is a fortunate situation so far as the kerosene market is concerned. For the past five years there has been very little change in the kerosene demand and if the supply had increased in line with the increased crude oil runs to stills the market would have been flooded with excess material.

Lubricating Oil

The lubricating oil situation so far this year is similar to that of kerosene. The total supply is slightly less than last year with the same percentage increase in demand. There has been a scarcity in certain stocks made from paraffin base or mixed base crude oils. Practically the only stocks that have suffered in price are the low viscosity neutral oils.

Fuel Oil and Gas Oil

Data on fuel oil and gas oil are in part estimates due to the fact that some California heavy crude oil is included in the California figures. The data indicate that the supply has exceeded the demand by 6,091,000 bbls. so far this year. The excess to a large extent has been confined to the coastal areas, the interior situation showing improvement over last year.

Petroleum Wax

In the past two weeks there has been some improvement in the petroleum wax situation. However, the government figures up to June 30 had not given any basis for this charge. In the face of a 29.9 per cent decrease in total demand, wax production practically all of which comes from domestic refineries, increased 6.8 per cent. A total of 78,420,000 pounds of wax was added to storage the first six months whereas last year for the same period 58,649,000 bbls. were withdrawn from storage. Stocks on June 30, 1929, were 105 per cent greater than on the same date last year.

PROPER CONTROL OF EFFECTIVE BACK PRESSURE

(Continued from Page 41)

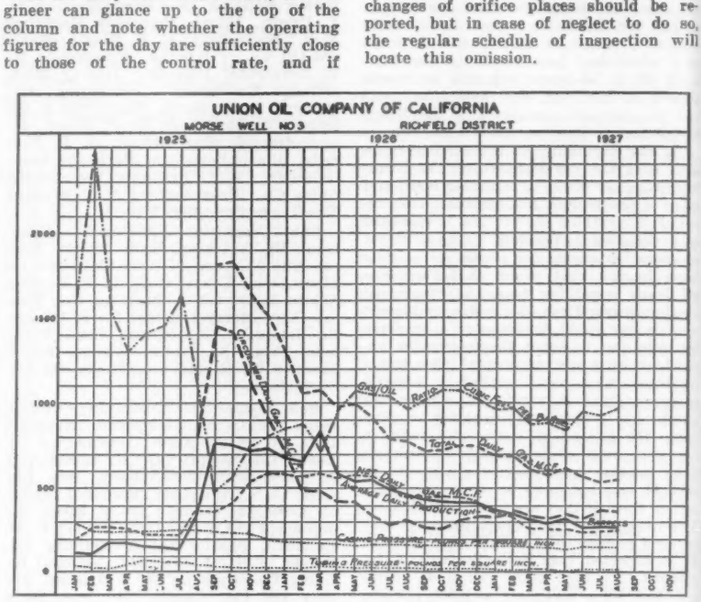
it would probably be well first to select an engineer who is a graduate of a technical school who has already had two or three years' experience in drilling, in production work, and in geological work, and give him from three to six months' training in each of the subjects listed above in approximately the order listed. He would then be qualified so far as technical experience goes to handle the executive phase of air-gas lift operations.

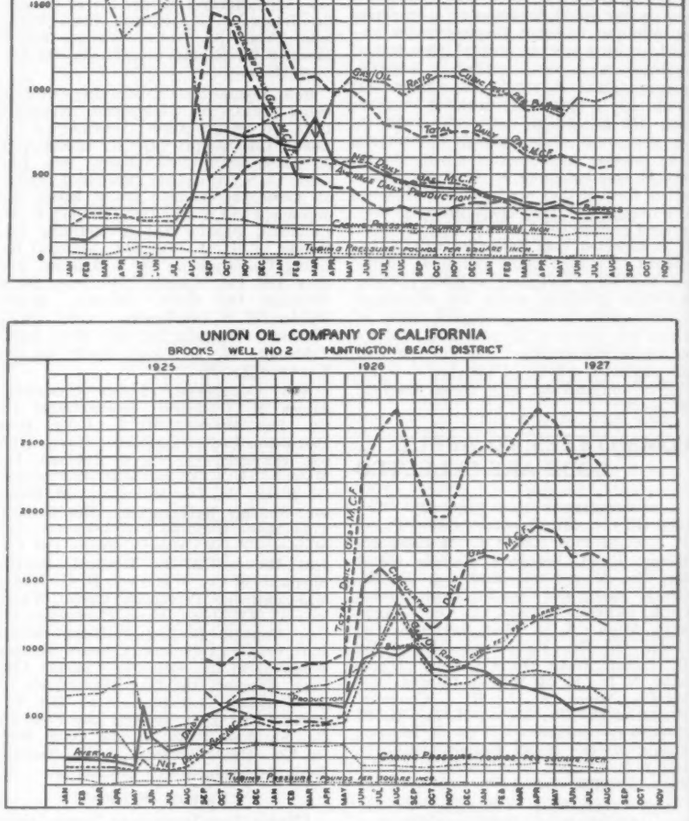
Periodic Tests

In order that the executive engineer may be in close touch with the operation of the wells, and know whether they are producing at the proper rate, it is necessary to make periodic tests of the wells and determine the proper and advisable rate of production. Tests can be entered for a record on a report form similar to Report No. 1.

As the daily entries are made, the engineer can glance up to the top of the column and note whether the operating figures for the day are sufficiently close to those of the control rate, and if not, he can take the necessary steps to remedy the trouble. A reduced input rate will generally denote a drop in production of oil for the day.

A regular schedule for inspection and repairs of meters should be followed, selecting a certain number each day and note the style of meter, orifice plate, etc., and make calculations of the orifice coefficient and compare with that being employed in the office for making calculations from the meter charts. All changes of orifice places should be reported, but in case of neglect to do so, the regular schedule of inspection will locate this omission.





DATA ON CALIFORNIA FLOWING WELLS

	Well—	1	2	3	4	5
1.	Bbls. oil per day	82	1,996	557	253	275
2.	Bbls. water per day	9	4	2	1	1
3.	Bbls. total fluid per day	91	2,000	559	254	276
4.	Cu. ft. oil per second	.005329	.129708	.036196	.016441	.017871
5.	Cu. ft. water per second	.000585	.000260	.000130	.000065	.000065
6.	Cu. ft. fluid per second	.005914	.129967	.036326	.016506	.017936
7.	Weight lbs. per sec. oil	.295104	7.01600	1.9711	.90254	.97364
8.	Weight lbs. per sec. water	.036518	.016230	.008115	.004057	.004057
9.	Weight l s. per sec. fluid	.331622	7.03223	1.979215	.906597	.977797
10.	M.c.f. free gas out per day	1,200	9,800	625	500	600
11.	Cu. ft. free gas out per second	13.8889	113.4260	7.2338	5.7870	6.9444
12.	Weight lbs. per sec. gas	.74307	6.0683	.38701	.3096	.37152
13.	Weight lbs. per sec. total	1.074692	13.10053	2.366225	1.216197	1.349317
14.	Operating pressure, abs. P_1	465	1,115	165	115	125
15.	Discharge pressure, abs. P_2	295	495	27	18	25
16.	$P_1 - P_2$ or P	170	620	138	97	100
17.	Specific gravity, oil	.8871	.8665	.8724	.8794	.8729
18.	Specific gravity, fluid	.89828	.8665	.8724	.8794	.8729
19.	Length of tubing, feet	4,000	4,885	3,650	3,655	4,140
20.	Submergence, feet	436.1	1,648.2	364.1	252.6	263.8
21.	Lift, feet	3,563.9	3,236.8	3,285.9	3,402.4	3,876.2
22.	Cu. ft. free gas per sec. in sol. @ disch.	.05329	2.24395	.01194	.0001	.00464
23.	Effective cu. ft. gas per sec. @ disch.	.70350	3.36915	4.01217	4.82391	4.16388
24.	Total cu. ft. per sec. @ disch.	.709414	3.499117	4.048496	4.840416	4.181816
25.	Flow area, sq. ft.	.02171	.03249	.04657	.03249	.04657
26.	Velocity, ft. per sec. @ disch.	32.67	107.69	86.93	148.98	89.79
27.	Work, ft. lbs. per sec. lifting total wt.	3,830	42,402	7,775.2	4,137.9	5,230.3
28.	Work, ft. lbs. per sec. accel. total wt.	17.8	2,362.1	278.0	419.7	169.1
29.	Work, ft. lbs. per sec. total	3,847.8	44,764.1	8,053.2	4,557.6	5,399.4
30.	Work, ft. lbs. per sec. in gas R_2	13,599	195,020	28,237	23,188	24,125
31.	Work, ft. lbs. per sec. in gas R_1	103,028	1,055,600	37,468	25,460	31,803
32.	Efficiency % through R_2	28.29	22.95	28.52	19.65	22.38
33.	Efficiency % through R_1	3.73	4.24	21.49	17.90	16.98

WEST TEXAS FIELDS

(Continued from Page 71)

small producers in this area, with the possibility of this making the sixth.

Loving County's Best Well

Loving County got the best well of its history this week when Lockhart & Co. brought in their No. 2 Bowen & Wells on the SW line of Section 92, Block 1, W.&N.W. Survey. Sandy lime was encountered from 4,194 to 4,233 feet and the well was shot with 150 quarts. In the first 24 hours it flowed 652 bbls. of oil and made 2,000,000 feet of gas from the Delaware sand. Wells in this area decline rapidly after coming in as good producers, but the oil is of high gravity and sweet, which makes the wells more profitable.

WEST TEXAS COMPLETIONS
Week ending August 10
Crane County

Duffey and Skelly Oil Co.'s No. 1 University, located 2,310 feet from south and 330 feet from east of Section 45, Block 30, topped the salt at 1,015 feet, topped the lime at 2,705 feet, topped the pay at 2,810 feet, was drilled to a total depth of 2,949 feet, was shot with 300 quarts at 2,810-2,949 feet and had an initial production of 248 bbls. Gulf Production Co.'s No. 65 McElroy, located 660 feet east of No. 61, Section 200, Block F, topped the salt at 1,135 feet, topped the lime at 2,725 feet, topped the pay at 2,840 feet, shot with 265 quarts at 2,866-2,940 feet and had an initial pro-

duction of 148 bbls. Prairie Oil & Gas Co.'s No. 8 University, located 2,310 feet from north and east of Section 39, Block 30, topped the salt at 1,100 feet, topped the lime at 2,800 feet, topped the pay at 2,913 feet, was drilled to a total depth of 3,042 feet, shot with 95 quarts at 2,-913-3,042 feet and had an initial production of 220 bbls. Warner-Quinlan Oil Co.'s No. 4 University, located 990 feet from south and 1,650 feet from west of Section 39, Block 30, topped the salt at 1,010 feet, topped the lime at 2,780 feet, topped the pay at 2,795 feet, was drilled to a total depth of 2,988 feet, shot with 200 quarts at 2,847-2,988 feet and had an initial production of 250 bbls.

Howard County

Amerada Petroleum Corp.'s No. 2 Stewart, located 200 feet from south and 660 feet from east of Section 130, Block 29, topped the pay at 1,418 feet, was drilled to a total depth of 1,445 feet, plugged back to 1,440 feet and had an initial production of 30 bbls. California Co.'s No. 7 Roberts, Lease No. 2. 874 feet from north and 990 feet from east of Section 137, Block 29, topped the pay at 1,860 feet, was drilled to a total depth of 1,880 feet and had an initial production of 165 bbls. Merrick-Lamb's No. 8 Roberts, located 1,120 feet from south and 1,110 feet from east of Section 126, Block 29, topped the pay at 1,798 feet, was drilled to a depth of 1,912 feet and had an initial production of 25 bbls. Moody Oil Corp.'s No. 11-B Roberts, located 1,700 feet from north and 2,300 feet from west of Section 137, Block 29, topped the pay at 2,475 feet, was drilled to a total depth of 2,615 feet and had an initial production of 50 bbls.

Glasscock County

California Co.'s No. 1 Turner, located 2,310 feet from north and east of Section 46, Block 33, T-2-S, was dry and abandoned at 1,534 feet.

Mid'and County

Shoupe and others' No. 1 Roy Parks, located 1,320 feet NW Section 34, Block 41, T-2-S, T.P.R.R. Survey, location was temporarily abandoned.

Mitchell County

Republic Production Co.'s No. 1 Scott, located 330 feet from south and west of Section 20, Block 17, was dry and abandoned at 3,285 feet. Simms Petroleum Co.'s No. 1 Ellwood, located 1,320 feet from south and east of Section 29, Block 18, topped the lime at 1,320 feet, made 2,000,000 feet of dry gas and was dry and abandoned at 4,725 feet.

Pecos County

Humble Oil & Refining Co.'s No. 6-B Smith, located 1,034 feet from north and 2,675 feet from east of Section 101, made 62 bbls. hourly at 1,567-1,688 feet. O'Mara's No. 1, located 1,470 feet from NW and 2,490 feet from SW cor. of Section 54, Block 10, topped the pay at 1,338 feet, was drilled to a total depth of 1,377 feet, was shot with 30 quarts at 1,335-61 feet and had an initial production of 40 bbls.

Ward County

Atlantic and Delman's No. 3 Hayzlett, located 2,490 feet northwest and 1,170 feet southwest of Section 17, Block 5, H.&T.C. Survey, topped the salt at 727 feet, topped the pay at 2,468 feet, was shot with 140 quarts at 2 468-2,500 feet and had an initial production of 137 bbls. daily and was drilled to a total depth of 2,500 feet. Kemper-Kimberlin's No. 1 Thompson, located in Section 15, Block 5, H.&T.C.R.R. Survey, location was abandoned.

Winkler County

Gulf Production Co.'s No. 1 Clapp, located 990 feet south and west of Section 37, Block 26, topped the lime at 2,297 feet, was drilled to a total depth of 2,-637 feet, tested 48,976,000 feet of dry gas and was completed as a gasser. Gulf Production Co.'s No. 3 Hendricks, located 330 feet north and 2,310 feet west of Section 44, Block 26, topped the lime at 2,818 feet, topped the pay at 2,830 feet, was drilled to a total depth of 2,874 feet and had an initial production of 800 bbls. daily. Southern Crude Oil Purchasing Co.'s No. 10 T-88-U Hendricks, located 330 feet south and 2,310 feet east of Section 41, Block 26, made 600 bbls. at 2,825-2,850 feet. Its No. 1 Hendricks T-89-L, located 440 feet north and 330 feet west of Section 15, Block B-12, topped the lime at 2,580 feet, topped the pay at 2,760 feet, was drilled to a total depth of 2,947 feet and had an initial production of 550 bbls. daily. The location was abandoned on Texas-Canadian Oil Co.'s No. 1 Kloh.

Yoakum County

Weekley's No. 1 Knight, located 1,320 feet south and west of Section 791, John Gibson Survey, was dry and abandoned at 4,505 feet.

ESTIMATED PRODUCTION WEST TEXAS
Week ending August 10

County—	Wells	Prod.
Crane County	310	37,604
Crockett County	43	1,587
Ector County	3	....
Fisher County	7	1,125
Glasscock and Howard	359	41,434
Jones County	83	3,280
Loving County	13	679
Mitchell County	142	2,642
Pecos County	375	140,035
Reagan County	243	17,940
Runnels County	3	30
Scurry County	5	25
Upton County	238	8,895
Ward County	7	1,619
Winkler County	607	140,585
Total this week	2,378	397,480
Total last week	2,376	399,645
Decrease	2	2,165

Runs to West Texas Refineries

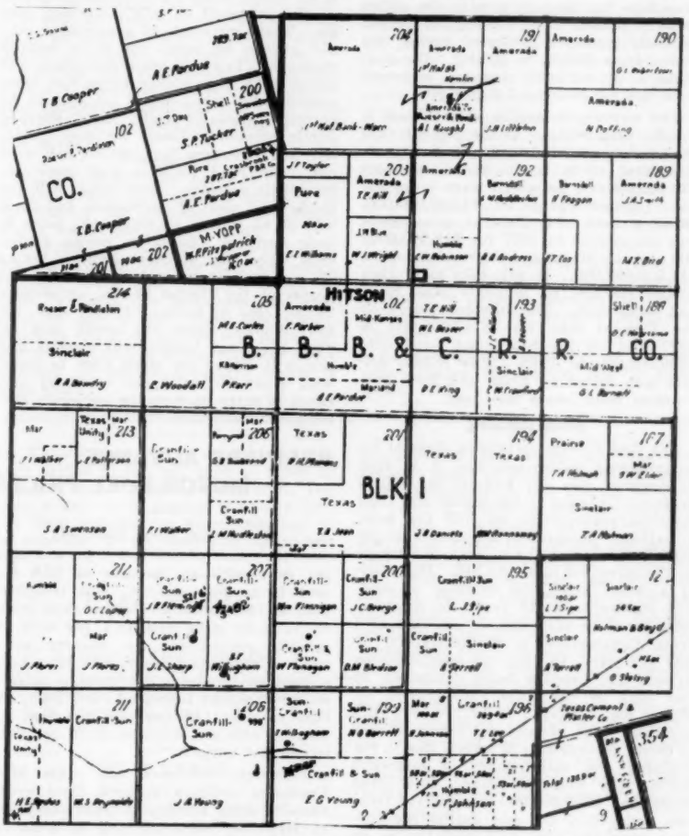
Amarillo Prod. Co., Pyote, Tex.	681
Bluebonnett Ref. Co., Wickett, Tex.	2,967
Burford Ref. Co., Pecos, Tex.	4,900
Col-Tex Ref. Co., Colorado, Tex.	7,000
Cosden Ref. Co., Big Spring, Tex.	6,467
Great Western Ref. Co., Big Spring, Tex.	4,223
Humble Oil & Ref. Co., McCamey, Tex.	10,680
Midland Ref. Co., Midland, Tex.	639
Tonkawa Ref. Co., Pyote, Tex.	off
Valley Ref. Co., Pyote, Tex.	3,099
Big Spring Ref. Co., Big Spring, Tex.	2,192
Richardson Ref. Co., Big Spring, Tex.	7,157
Total	50,005

Summary

	Previous week	Last period
Pipe line runs through Trunk lines	353,495	346,814
Tank car shipments	20,342	23,918
Runs to West Texas refineries	63,970	50,918
Total daily distribution	437,807	421,650
Total daily production	392,930	390,202
Daily average from storage	44,877	31,448

PECOS COUNTY
Yates Pool
Week Ended August 6

Company and lease—	Wells	Prod
M. H. Black:		
Fee	1	8
California Co.:		
Yates, Lease 1	18	11,075



Plat of northeastern corner of Fisher County showing location of Amerada Petroleum Corp. and Roeser & Pendleton's No. 1 Haught, a wildcat standing with 850 feet of oil in the hole at total depth of 3 123 feet, after encountering the pay at that point. Elevation on the surface is 1,803 feet. Plat by Courtesy of the Heydrick Mapping Co.

PIPE LINE RUNE
July 24 to July 31
Runs Through Trunk Lines

	Last period
Atlantic P. L. Co., Port Arthur, Tex.	38,500
Gulf P. L. Co., to coast via Ranger, Tex.	36,321
Humble P. L. Co., Comyn, Tex.	47,434
Humble P. L. Co., Ingleside, Tex.	44,217
Illinois P. L. Co., via Del Rio, Tex.	50,000
Magnolia P. L. Co., to De Leon, Tex.	22,714
Pasotex P. L. Co., El Paso, Tex.	10,181
Shell P. L. Co., Healdton, Okla.	42,285
Shell P. L. Co., Houston, Tex.	2,499
The Texas Company, Houston, Tex.	52,663
Total	346,814

Tank Car Shipments

Reagan County P. Co., Kemper, Tex.	off
Thomas & Brann, Grant City	off
Orient, McCamey, Tex.	122
The Texas Co., Crossett, Tex.	off
T. P. Coal & Oil Co., McCamey, Tex.	off
American Pet. Co., Pyote, Tex.	4,775
Skelly Oil Co., Pecos, Tex.	off
Southern Crude O. P. Co., Wickett, Tex.	19,021
Total	23,918

Smith, Lease 1, Sec. 37	3	530
Smith, Lease 1, Sec. 23	7	2,171
Smith, Lease 1, Sec. 21	3	1,007
Smith, Lease 2	2	122
Smith, Lease 3	12	2,700
Smith	1	6
Tippett, Lease 1	1	34
Cosby Drilling Co.:		
Smith	1	235
Gulf Prod. Co.:		
All leases	37	17,780
Humble Oil & Ref. Co.:		
Smith-A	10	2,029
Smith-B	5	1,106
Kirby Pet. Co.:		
Tippett	2	60
Kirby Pet. & Edson:		
Tippett	1	240
Mariand Oil Co.:		
Yates-A	6	1,110
Yates-A, salvage		5,901
Mazda & Savoy:		
Smith	3	660
McCarty Oil Co.:		
Gray	1	6
Bennett	1	12
McMan Oil & Gas Co.:		
Smith-A	1	1,879
Smith-B	4	1,511
Smith-C	7	795
Tippett	2	240
Richardson	1	69
McMan & Mariand:		
Yates	17	6,537
Mid-Kansas & Trans.:		
Yates-A	27	18,849
Yates-B	28	8,515
Yates-C	11	10,116
Yates-D	7	8,792
Yates-E	1	102
Yates-F	4	800
Yates-G	4	3,033
Yates-H	9	8,167
Smith	5	1,945
Smith	18	4,724
Grayburg Oil Co.:		
Pecos River Bed	6	150
Salvage		369
Pecos Valley Oil Co.:		
Fee, Sec. 22, Blk. 26	2	66
Phillips Pet. Corp.:		
Monroe	1	70
Ramsey	2	620
Smith	2	660
Plymouth Oil Co.:		
Perry	1	30
Red Bank Oil Co.:		
Smith	5	512
Shell Pet. Co.:		
Tippett	11	3,267
Smith	10	1,423
Smith-B	1	659
Smith-D	3	671
Smith-E	1	19
Simms Oil Co.:		
Smith	7	6,960
Skelly Oil Co.:		
Tippett	1	90
Taylor Link:		
University	1	113
Total Yates Field	315	138,546

Daily Average Production by Leases

WINKLER COUNTY
Week Ended August 6

County, farm, section and block—	Wells	Prod.
Amerada Pet. Corp.:		
Cowden, 3, B-12	3	89
Atlantic O. P. Co.:		
Hendricks-A, 34, B-5	8	2,153
Hendricks-B, 44, 26	5	682
Hendricks-D, 29, B-5	9	1,325
Hendricks-E, 41, B-5	6	1,680
Hendricks-G, 46, 26	7	71
Hendricks-H, 30, B-5	1	Off
Atlantic & Collett:		
Hendricks-F, 40, 26	13	1,689
Bankers Prod. Co.:		
Hendricks, 30, B-5	1	18
V. T. Bolin:		
Brown-Altman, 4, B-5	1	3
California Co.:		
Hendricks, 29, B-5	7	916
Cranfill & Reynolds:		
Hendricks, 28, B-5	3	317
Hendricks-B, 35, B-5	1	110
Hendricks-C, 33, 26	3	59
Hendricks-E, 33, 26	2	472
Cranfill & Texon:		
Hutchings, 47, 26	1	70
Culberson Bros.:		
Hendricks, 40, B-5	1	44
Eastland Oil Co.:		
Hendricks, 33, B-5	2	334
Hendricks-B, 46, 26	1	187
Gulf Prod. Co.:		
Hendricks-A, 34, B-5	13	4,398
Hendricks-B, 45, 26	11	4,217
Hendricks-C, 40, B-5	6	586
Hendricks, 44, 26	3	531
Cowden, 3, B-12	3	1,378
Humble Oil & Ref. Co.:		
Hendricks-A, 34, B-5	17	5,527
Hendricks-B, 29, B-5	6	1,119
Hendricks-C, 32, 26	8	643
Hendricks-D, 39, 26	7	409
Hendricks-C, 10, B-12	11	6,044
Walton, 48, 26	1	106
Independent Oil & Gas:		
Hendricks-A, 34, B-5	7	1,169
Howe-B, 44, 26	3	202
McCabe, 36, B-5	2	230
Hendricks, 42, B-5	1	2
Vardeman-B, 41, B-5	7	250
Magnolia Pet. Co.:		
Hendricks, 29, B-5	5	480
Mariand Oil Co.:		
Hendricks, 33, 26	4	691
Hendricks, 29, 26	3	128
Hendricks, 34, 26	2	199
May Prod. Co.:		
Hendricks, 34, 26	1	16
American Maracaibo:		
Hendricks-A, 28, B-5	1	40
Hendricks-B, 28, B-5	1	305
Mining & Engineering:		
Hendricks, 10, B-12	1	Off
Murchison & Cranfill:		
Hendricks-A, 35, B-5	3	762
Hendricks-B, 35, B-5	3	572
Hendricks-C, 35, B-5	1	19
Hendricks-H, 35, B-5	1	1,119
Hendricks-I, 34, 26	2	375
Prairie Oil & Gas Co.:		
Hendricks, 40, 26	6	1,470
Cowden, 3, B-12	6	3,901
Pure Oil Co. (Lion):		
Hendricks-A, 41, B-5	11	2,190
Hendricks-B, 34, B-5	13	4,860
Hendricks-C, 45, 26	14	6,625
Hendricks-D, 44, 26	1	124
Republic Prod. Co.:		
Hendricks-A, 45, 26	12	3,564
Hendricks-B, 41, B-5	5	265
Shell Pet. Co.:		
Hendricks-A, 45, 26	6	1,942
Hendricks-B, 29, B-5	6	1,686
Hendricks-C, 29, B-5	8	657
Hendricks-D, 41, B-5	6	71
Hendricks-E, 40, B-5	3	758
Hendricks-F, 46, 26	8	349
Hendricks-G, 39, 26	1	83
Shell-Texas Co.:		
Cosden-A, 3, B-12	6	1,633
Hendricks, 45, 26	6	2,526
Hendricks-A, 29, B-5	11	3,326
Hendricks-B, 40, 26	6	845
Hendricks-C, 40, 26	6	1,786

(Continued on next page)

Hendricks-D, 40, 26	6	295
Hendricks-E, 39, 26	4	262
Skelly Oil Co.:		
Hendricks, 40, 26	12	6,037
Hendricks-B, 10, B-12	2	19
Hendricks-C, 39, 26	1	181
Southern Crude O. P. Co.:		
T-67 Hendricks-A, 42, B-5	2	139
T-67 Hendricks-3-A, 4, B-12	4	540
T-68 Hendricks-B, 44, 26	5	462
T-67 Hendricks-3-B, 33, 26	4	449
T-67 Hendricks-C, 33, B-5	5	620
T-67 Hendricks-2-D, 28, 26	5	1,355
T-67 Hendricks-E, 42, B-5	4	117
T-67 Hendricks-F, 33, B-5	5	748
T-68 Hendricks-3-A, 35, B-5	3	108
T-68 Hendricks-B, 46, 26	2	186
T-88 Hendricks-A, 44, 26	6	870
T-88 Hendricks-B, 4, B-12	4	1,015
T-88 Hendricks-C, 28, B-5	8	1,386
T-88 Hendricks-D, 4, B-12	6	3,525
T-88 Hendricks-H, 28, B-5	7	1,310
T-88 Hendricks-I, 30, B-5	7	737
T-88 Hendricks-J, 30, B-5	5	673
T-88 Hendricks-K, 41, 26	7	1,243
T-88 Hendricks-L, 4, B-12	4	1,003
T-88 Hendricks-M, 33, 26	33	15,546
T-88 Hendricks-N, 28, 26	7	1,432
T-88 Hendricks-O, 28, 26	4	805
T-88 Hendricks-P, 28, 26	2	286
T-88 Hendricks-Q, 27, 26	2	864
T-88 Hendricks-R, 27, 26	3	862
T-88 Hendricks-S, 34, 26	4	1,262
T-88 Hendricks-T, 34, 26	7	1,034
T-88 Hendricks-U, 41, 26	10	1,590
T-88 Hendricks-V, 29, 26	1	51
T-88 Hendricks-W, 5, B-12	1	310
T-88 Hendricks-CX, 21, 26	3	1,070
T-89 Hendricks-A, 35, B-5	2	255
T-89 Hendricks-B, 35, B-5	2	317
T-89 Hendricks-C, 35, B-5	3	720
T-89 Hendricks-D, 35, B-5	1	186
T-89 Hendricks-E, 40, B-5	3	149
T-89 Hendricks-F, 40, B-5	2	190
T-89 Hendricks-H, 46, 26	2	232
T-89 Hendricks-I, 10, B-12	2	72
T-89 Hendricks-J, 9, B-12	8	2,562
T-90 Hutchings, 47, 26	1	255
Texon Oil & Land Co.:		
Hendricks-A, 41, B-5	6	589
Hendricks-B, 45, 26	6	1,368
Winkler O. P. Co.:		
Hendricks, 33, 26	1	Off
Total Hendricks Pool	585	134,781
Leck Area		
Atlantic, Kessler & Logan:		
Leck, 3, 74	2	402
Amerada Pet. Corp.:		
Leck, 3, 74	2	448
Empire Gas & Fuel Co.:		
Daugherty, 3, 74	3	234
Magnolia Pet. Co.:		
Scarborough, 1, C-22	2	275
Gulf Prod. Co.:		
Scarborough, 1, C-22	1	77
Gulf Prod. Co.:		
Daugherty, 3, 74	1	1,566
Shell-Llano Oil Co.:		
Daugherty, 1, C-22	4	336
Shell-Danciger:		
Daugherty, 3, 74	2	133
Skelly Oil Co.:		
Daugherty, 22, 16	2	444
Tidal Oil Co.:		
Scarborough, 1, C-22	1	175
Prairie Oil & Gas Co.:		
Leck, 16, 74	1	383
Daugherty, 3, 74	1	201
Scarborough, 1, C-22	1	68
Warner-Quinlan:		
Leck, 3, 74	1	462
Total Leck Pool	24	5,204
O'Brien Pool		
Marland Oil Co.:		
Morton, 10, B-12	2	101
Wentz Oil Corp.:		
Morton, 10, B-12	1	204
Simms Oil Co.:		
Sealy, 50, F	1	26
Richardson et al:		
Stockton, 50, F	1	118
Total O'Brien Pool	5	449
Total Winkler County Field	614	140,434

WARNS TAX CONFERENCE PATIENCE IS LIMITED

(Continued from Page 48)

the oil industry in the Middle West will be bearing as great a burden in indirect taxation as is borne by the direct tax upon its property. In the State of Missouri last year the Standard Oil Co. of Indiana paid to municipalities $89,000 in indirect taxes while bearing a burden of only $101,000 levied directly upon the property of its sales organizations in that state.

During the past 25 years the total cost of federal, state and local governments has increased from $1,382,000,000 in 1903, to $9,753,000,000 in 1927, or 605 per cent. During the same period the cost of the Federal Government increased from $521,000,000 to $3,644,000,000, an increase of $3,123,000,000 or 599 per cent; the state governments from $155,000,000 to $1,727,000,000, an increase of $1,572,000,000, or 1,014 per cent; local governments from $706,000,000 to $4,382,000,000, an increase of $3,676,000,000 or 520 per cent. It is reasonable to presume that the cost of all government for 1928 was not far from $10,500,000,000 and for the current year will reach $11,000,000,000. If the later figure is approximately correct, then between 1903 and 1929, there has been an increase of more than 700 per cent in the cost of government, while the national income has increased but 340 per cent. In 1903 the cost of government was 6.7 per cent of the national income while today it is more than 12 per cent. In other words, of every $8 of the income of our commonman, $1 goes to the tax collectors.

Burden Per Taxpayer

The national income from 1903 to 1928 increased from $20,500,000,000 to $90,000,000,000 or an increase of 339 per cent. In 1903 the Federal Government cost 2½ per cent of the national income while in 1926 it cost 4 per cent. The burden per person gainfully employed during the period from 1903 to 1926 increased from $16.50 to $74.29.

Turning to the States we find the story repeated. In 1903 the burden per person gainfully employed was $4.91 and in 1926 it was $29.28. The burden of the State government in 1903 was eight-tenths of 1 per cent of the national income and in 1926, 1.6 per cent.

The burden of cities, counties and townships has kept pace with the states and the nation. The burden per person gainfully employed increased during this period from $22.35 to $94.60. The percentage of national income increased from 3.4 per cent to 5.2 per cent.

The increase in public indebtedness is equally disquieting. At the present time the total bonded indebtedness of all governmental units is in round numbers $30,000,000,000 on which there is an annual interest charge of $1,300,000,000. Of this debt the Federal government was responsible in 1927 for $18,500,000,000 and the States and their subdivisions, $11,500,000,000. It will take more than $20,000,000,000 to liquidate this State and local debt. The interest charge on the Federal debt was $787,000,000 in 1927 and on the State and local debt $500,000,000 in 1928. Two billion dollars was raised by State and local government bond issues last year.

Road Building

We find an ever increasing demand for paternalistic enterprises and it is easy to discover why our Federal tax bill is greater. Turning to the States and their political subdivisions we find the same situation. Corruption in cities and paternalism account for a large percentage of the increased local tax bill. But there is another factor, the building of modern highways. In 15 years the total expenditures for this purpose has increased from $240,000,000 to $1,600,000,000 or 567 per cent. In 1921 the special motor vehicle and gasoline taxes comprised 26 per cent of the total expenditures by States for roads and in 1927 it was 64.8 per cent. The phenomenal increased cost of State governments is largely due to the building and maintenance of highways during the past 10 years. Last year more than $300,000,000 was derived from the motor fuel tax and during the current year the sum will probably be in excess of $400,000,000. At the present rate of increase, it will not be long until this one commodity will bear a burden greater than the total cost of the Federal government before the World War.

At earlier meetings of this conference, 5 cents a gallon motor fuel tax was considered the dead line. Already that has been passed, and your minds have become familiarized with a 6-cent tax, while a 10-cent tax doubtless slumbers in your subconscious minds. The ease with which you have collected these huge sums not only encourages you to collect still greater sums, but is popularizing the idea of an indirect tax with revenue hunters everywhere. The legislative assemblies last winter were glutted with schemes of taxation which we neither prorated on property nor proportioned according to ability to pay. Among them were general sales taxes; special sales taxes on lubricating oils; capital stock taxes; occupation taxes; business turnover taxes; chain store taxes; huge truck and bus taxes. It would be difficult to conceive an object of taxation which was overlooked. They clearly indicate the trend of the law-making mind. The State income tax will be general within 10 years. All these proposed laws contemplated burdens not in lieu of existing burdens. The municipalities likewise are everywhere reaching out with occupation taxes and excises of various kinds, to say nothing of the revenue being collected under regulatory ordinances supposedly referable to police powers.

Headed for Confiscation

I can see nothing in the future but that either the people will become conscious of the tremendous burdens imposed upon them, and call a halt, or we will march directly into the socialistic state. At the present rate of increase in tax burdens, it will take only a generation or two to confiscate private property. This is not a rhetorical flourish, but sober judgment based upon the history of public finance, and an analysis of the trend in the past 25 years.

It is my judgment that the example of the gasoline sales tax is resulting in a widespread and general orgy of indirect taxation, unless checked by the people, will constitute a serious menace to the American ideal of government. You and I, of course, believe in the final saneness of the judgment of the American people. Their correction of government may not always be wise, but it is usually thorough. You and other gentlemen will continue to urge higher taxes and more revenue, for what seems to you to be perfectly laudable ends, until sleeping public opinion suddenly becomes an active and relentless fury, which will wipe out your road building and your paternalistic schemes. Your roads will end in the mud short of destination and there will be no money to repair the holes in their surfaces. In other words, gentlemen, when cost of government is taking 25 per cent of the total income of the people of the United States, or perhaps 20 per cent or perhaps 18 per cent, nobody knows where the break will be, your iridescent bubble will explode and you will secure for some time to come, with great difficulty the necessary revenues to carry on even the necessary governmental activities.

REFINERS ADVANCE MOTOR FUEL PRICES

(Continued from Page 36)

over the same period last year was 16.6 per cent with an increase of 13.8 per cent in gasoline output. This compares with an increase of 10.7 per cent in crude oil runs to stills and 18.1 per cent in gasoline output for the country as a whole. California refiners who have been a dominant factor in the gasoline market so far this year increased their crude oil runs to stills 14.8 per cent the first six months with an increase of 36 per cent in gasoline output.

Although Oklahoma and other Mid-Continent refiners reduced their crude runs to stills slightly in June compared to May they were not able to draw on their gasoline storage in June as they should have to maintain a healthy market condition. Gasoline stocks at the end of June were practically the same as on May 31. These June 30 stocks, as shown in the accompanying table, were 3,711,000 bbls. or 78 per cent greater than on the same date in 1928.

Stocks on June 30 of last year were below normal for the Mid-Continent. This does not alter the fact, however, that present stocks are excessive and have constituted a menace to gasoline prices over the past 60 days. If these stocks are forced on the market between now and end of the main gasoline consuming season, in the opinion of many trade observers it will be difficult to maintain present spot prices.

Gasoline and Naphtha

Sales to jobbers as reported by the larger refiners on Monday, which are the basis for the weighted average price carried in this issue, showed a price range of from 7¼ to 7¾ cents for U. S. Motor gasoline. Three refiners did not report any spot sales.

Some of the refiners made similar advances in the higher gravity grades. The high gravities were inactive so far as suot business was concerned. Most of the Oklahoma refiners only refine enough high gravity gasoline to supply regular customers. No additional export business was placed during the past week although inquiries were reported. It is still believed that additional orders will be placed with Mid-Continent refiners before the end of the month.

The naphtha demand is fair and most refiners are asking the same for the 50-52 450 grade that they do for U. S. Motor gasoline.

Kerosene and Distillate

The range in kerosene prices is unchanged over last week. Many buyers and sellers feel that prices will not go lower on kerosene regardless of what happens to the gasoline market. The demand has been exceptional so far this summer and the fall consumption will soon be under way.

There is some shifting from kerosene to the better grades of distillate for tractor fuel and this had aided the market for that product. Distillate prices were advanced one-eighth cent last week and the same advance was made this week. Very little 38-40 straw distillate of low flash and low cold test is being offered in Oklahoma, according to the buyers. Sales of this product at 3¾ and 3⅞ cents were reported in the past few days with a low of 3½ cents.

Most of the trading is in the lower gravity grades of distillate. The demand for these is active with many of the sellers prefering to await future development rather than take large orders at present prices.

Fuel Oil and Gas Oil

The low of the gas oil market for spot shipment the first of the week was 2½ cents. Material has been available as low as 2⅜ cents in previous weeks. The price range on U.G.I. material is generally 2½ to 2⅝ cents. The 32-36 straw gas oil suitable for cracking stocks or blending material was bringing a low of 2⅝ cents with sales reported at 2¾ and 2⅞ cents. The better grades are scarce.

There was no change in the fuel oil situation. The lower gravities are in fair demand with no change in prices. The higher gravities are hard to find and prices are firm following the advances early in the month.

Natural Gasoline

One Tulsa concern is reported to have purchased 400 cars of Grade BB in Oklahoma and North Texas. Another Tulsa company bought 200 cars of Grade AA. Both of these purchases were for prompt movement to the coast.

With an improved movement to regular customers these two large purchases served to tighten the spot market. On Tuesday very little if any Grade A or AA was available under 6¼ cents with a price range of from 5⅞ to 6 cents on the remaining grades.

Lubricating Oil and Wax

A check made of bright stock inventories last week showed that storage was confined to one refiner. Some of the other manufacturers were oversold for August with excellent prospects for September. Despite this strong situation the attitude of manufacturers at this time is to continue present prices.

The price range of 2⅝ to 2¾ cents for 124-126 wax is unchanged.

MID-CONTINENT REFINERY OPERATIONS
(Data given in thousands of barrels)

	Crude runs to stills			Gasoline production			Gasoline stocks		
	June 1929	May 1929	June 1928	June 1929	May 1929	June 1928	June 1929	May 1929	June 1928
Okla.-Kans.	9,904	10,006	9,173	5,266	5,229	4,993	5,205	5,382	2,959
Texas*	5,248	5,637	3,757	1,979	2,015	1,484	1,106	989	684
La.-Ark.*	2,132	2,200	1,783	705	747	520	320	307	68
	17,284	17,843	14,713	7,950	7,991	6,997	6,631	6,678	3,711

*Does not include Gulf Coast. All data based on Bureau of Mines reports.

PAYNE MADE OIL WELL SUPPLY CO. TREASURER

Following a meeting of the board of directors of the Oil Well Supply Co., announcement was made of the election of Leon F. Payne as treasurer, to succeed H. H. James, recently elected vice president in charge of manufacturing. Lester H. Keim was elected vice president in charge of the company's California division.

Mr. Payne has been manager of the credit department of the Carnegie Steel Co. assuming his new duties on August 15. He is a graduate of Brown University and began his business career in 1907 with the cost department of the Western Electric Co. In 1909 he became associated with the Carnegie Steel Co. and

L. F. Payne

after spending a year in the sales department was transferred to the credit department, becoming head of that department in 1918. Mr. Payne is a member of the board of directors of the Diamond National Bank, Pittsburgh, and of the Pittsburgh Forgings Co., and a member of the Board of the Credit Association of Western Pennsylvania. He is a member of the University Club, the Keystone Athletic Club, and resides in Edgewood, a Pittsburgh suburb.

Mr. Keim received his training in the Carnegie Institute of Technology, Pittsburgh, and had his first business experience with the Union Switch & Signal Co. Later he did consulting engineering and plant efficiency work, then became connected with the R. D. Nuttall Co. as manager of the sales department and had charge of the engineering department. Mr. Keim, in collaboration with the engineering department of the Oil Well Supply Co., had much to do with the development of the "Oilwell" Hild differential drive for deep well drilling. Mr. Keim has been in the engineering department of the Oil Well Supply on the Pacific Coast since 1924, moving up to position of assistant manager and in 1928 becoming manager of the California division.

SLICK CO. PURCHASES IN OKLAHOMA-KANSAS

The Tom Slick Oil Co. has purchased from Anderson & Pritchard Oil Corp. a one half interest in all its acreage in Township 11-2w, Oklahoma County, for a cash consideration of $500,000. The acreage is divided into 21 tracts consisting of 1,575 acres, all in the same township. It is believed that the Tom Slick Oil Co. will begin operations on some of these tracts in the near future. The same company also purchased 20 acres in Section 18-11-2w from W. H. Atkinson, the acreage being located in the E½ SW SE of the section. The same company is also reported to be negotiating for a half interest in the holdings of Hilligoss & Steinbuchel in Rice County, Kansas, on which a wildcat test has been drilled to the pay sand at 3,275-77 feet, and it has been swabbing about 100 bbls. a day of 51 gravity oil. The deal has been pending for some time and it is expected to be completed in a few days.

OVERPRODUCTION OF CRUDE AND STATION DUPLICATION WASTEFUL

By H. B. Earhart
President, White Star Refining Co.

At present the oil industry is producing more of a limited, vital national resource than the public either needs or wants, which, of course, is uneconomic—therefore wasteful.

It is exhausting another natural resource (i.e. natural gas) to produce this excess of crude which is a double waste.

The industry is co-operating with the Government to eliminate this waste and there is reason to hope for relief in the not distant future.

Refinery Operation

The present trend of the refiner to move his refinery adjacent to his permanent market and transport his crude to it by pipe line or water transport is proving more economic than the earlier practice of locating it adjacent to a somewhat ephemeral flush production and then seeking a market by rail.

The present rapid movement of the refiner toward acquiring his own branded product presages a not distant time when he will manufacture a sufficient supply to fill the demand for his branded product—and no more—all of which should make for greater stability and the elimination of so-called "distress" gasoline.

For the present, however, the refiner who is unwilling or unable to acquire his own distributing facilities will from time to time have increased quantities of gasoline to move.

Distribution

To the writer the industry is overlooking a vital fundamental economy in distributing its product to the public, which makes for further waste.

The industry has invested in distributing facilities a gigantic sum on which interest, taxes and insurance must be paid. Perhaps this investment is necessary to conveniently serve the public, which is doubtful, but the fact is the industry is increasing this investment many millions of dollars annually, which is more waste.

Under the urge of the freest competition in the world the various units are in an inspiring struggle each to outdo the other on a quality product, without excessive waste in the manufacture of this vital natural resource.

In the aggregate the various units are spending many millions of dollars annually to bring to the public attention the merits of their various branded products, all of which is fine.

At this point the science of merchandising, in other industries, points to the desirability of building a distribution to meet the convenience of the company's patrons. When this is accomplished, any multiplication of facilities only increases overhead and creates waste.

The chain store manager who would locate two stores on opposite corners to purvey his wares would be adjudged insane, and the problem of purveying a branded petroleum product is, essentially, a chain store problem.

The chain store management strives to locate enough stores to conveniently serve his patrons; with this accomplished, he faces the fact that each addition only increases operating costs, brings no added revenue in return and is sheer waste.

The petroleum company that builds two filling stations in close proximity is doing just this, and the fundamental principal is the same whether the petroleum company buys the sites and builds his own stations in close proximity or encourages two "dealers" of limited means to do it.

In the latter case the two "dealers" must have substantially twice the margin necessary to properly support one dealer, if they are both to build a permanent business.

Again from the viewpoint of economically serving the public this is sheer waste.

Late Fields

(Continued from Page 48)

2 Ahler, a workover at Big Creek, Tex., was brought in today flowing 800 bbls. of 29.6 gravity oil from sand at 3,680 feet.

WEST TEXAS

FORT WORTH, Tex., Aug. 13.—In Fisher County, Roeser & Pendleton and the Amerada Petroleum Co.'s No. 1 Haught, SW Section 191, B.B.B.&C. Survey, topped the lime at 3,123 feet, total depth 3,123 feet, and has a hole full of oil. The crew is underreaming 6-inch casing. Mid-Kansas and Transcontinental's No. 2-E Yates, Pecos County, CWL Section 59, Block 1, I.&G.N. Survey, got the top of the pay at 1,240 feet, total depth 1,245 feet. It flowed 712 bbls. on a 12-hour test. In Young County T. G. Shaw and others' No. 1 Kissinger, SE part of John Conner Survey, Abstract 57, had oil at 2,492-2,542 feet, total depth 2,542 feet. It flowed 111 bbls. by heads in 24 hours.

NORTH LOUISIANA

SHREVEPORT, La., Aug. 12.—The first producer in the Pleasant Hill district of Sabine Parish in more than a year, and one of the best wells completed in that pool, was brought in late Saturday flowing at the rate of 135 bbls. an hour of 43 gravity oil. It overflowed all available tankage before pipe line connections could be made. Thirty-six hours after completion it was flowing 80 bbls. an hour. The well is Bridges Clark Oil Co.'s No. 1 Williams, in the NE SW, Section 33-12-10. It is within the proven area and between two older producers. The total depth is 3,215 feet with the 6⅝-inch casing cemented at 3,146 feet and broken lime and sand from the casing seat to the bottom.

Standard Oil Co.'s No. 22-B Bodcaw, Section 28-21-10, Cotton Valley district, tested 37,000,000 feet of gas at 1,460 pounds, total depth 4,631 feet. This was rather surprising as well as disappointing as the well had cored 7 feet of saturated sand at 4,612-19 feet, 181 feet above the deep stuff discovered by Ohio Oil Co. in March, 1928, and a producer was expected.

LOWERED TANKER RATES CAUSE CHEAP FUEL OIL

HOUSTON, Tex., Aug. 13.—The easing up in a tight tanker situation at Gulf Coast ports with a consequent lowering of rates, indicated the past week, is expected to cause a resumption in movement of large quantities of fuel oil from Gulf Coast ports and it is likely that considerable cheap material will be offered on the Atlantic Seaboard market from this source. With movement of fuel again becoming possible with tankers available, a decidedly weaker price tone was evident during the week and sellers, who for several weeks have been holding a nominal price of a minimum of 75 cents for bunker oil, today were offering material as low as 70 cents.

The fuel oil situation has been weak ever since tankers became tight and the rate advanced to a prohibitive figure, forcing the accumulation of storage, but unable to move the product at any price sellers have made no attempt to get sales by lowering prices. Now, it is apparent there is considerable distress material with which coastal sellers can compete in price with the California and eastern material.

Tankers Tuesday were being quoted from 38 to 39 cents from Gulf ports to the north of the Hatteras, which is a rate of from 5 to 6 cents less than the peak which has been asked for several weeks when tankers were nearly all tied up in California to Atlantic Seaboard service.

Throughout the period of fuel oil accumulation, the local bunkering market has remained steady with this business fairly well stabilized by established sources of supply. Several important sales of Bunker C oil locally were reported during the week bringing the top price of $1.

Other products, except gas oil which is uniformly firm, continued sloppy with no immediate relief in sight. Pale and red oils suffered no further outward reductions in prices although the market now is on the generally lower plane established the previous week when several sellers lowered quotation to meet competition. Gasolines were extremely unsteady with an abundance of material available locally at 8½ cents.

CAMP AND MORGAN JOIN TO SELL NEW SEPARATOR

C. F. (Heavy) Camp and Jim Morgan, both well known in the oil industry, have organized the Camp-Morgan Co., of Tulsa, to handle a new separator, the Black Gold. The company also will act as distributor for the Neilan-Schumacher line of regulators and automatic control

James Morgan

devices. The Black Gold separator is equipped with a new and patented mist extractor.

Mr. Camp for several years has headed the C. F. Camp Co., Tulsa, an oil field equipment concern. Mr. Morgan for years was sales manager of the Smith Separator Co. The trade name of the new company is CMCO.

USE SEABOARD PROCESS OF SULPHUR REMOVAL

The new liquid purification plant for the removal of sulphur from natural gas at Kenton (Lost Dome) in the Hardin and Wyandot Field, Ohio, is being operated by the Ohio Fuel Gas Co. under a license from the the Koppers Co. of Pittsburgh to use its patented seaboard process. (This sulphur removal plant was described in The Oil and Gas Journal of August 30, 1928.) The gas a Kenton contains about 250 grains of H_2S per 100 cubic feet and is purified at about 60 pounds pressure. The new purification plant is capable of cleaning 500,000 to 1,000,000 feet of gas daily, the gas being piped to Kenton, Lima, Ada, Cridersville, Wapakonetta and other towns.

The seaboard process of liquid purification was first developed by the Koppers Co. for purification of coal and water gas; at the present time 300,000,000 feet of various kinds of gas are being purified daily by the seaboard process. It was soon found that this process was particularly adapted to the removal of sulphur from natural gas and refinery still gas, due to its ready use under high as well as low pressures, low investment and operating cost and to the simplicity with which it is operated. So great are its advantages, that in the past few years eight plants have been built to remove the sulphur from 56,000,000 feet of natural gas or refinery still gas per day. Seaboard process plants have been built for the Gulf Production Co. and The Texas Company of Texas, the Union Natural Gas Co. and the Southern Ontario Gas Co. of Ontario, the Royalite Oil Co. in Alberta, the Illinois-Missouri Pipe Line Co. in Illinois, the Carbide & Carbon Chemicals Corp. in West Virginia, and the Ohio Fuel Gas Co of Ohio. A seaboard liquid purification plant is now being built for the Northern Indiana Public Service Gas Co. at Hammond, Ind., and an additional unit will be installed at Port Arthur for The Texas Company, which will double the purification capacity there. Both of these new plants will purify refinery gas. The Koppers Co. process is the only one which has been put into successful operation on a large scale for removal of sulphur from natural gas and refinery gas.

NEW BRUNSWICK FIELD EXCLUSIVE CONCESSION

By Victor Lauriston

CHATHAM, Ontario, Aug. 3.—Of the provinces of eastern Canada, New Brunswick is the only one to develop any natural gas or oil production of commercial importance. Drilling will be largely limited this year to cleaning out and deepening old wells and to redrilling the proven field, with a view to maintaining the natural gas supply. The field is at Stoney Creek, in Albert and Westmorland Counties; and the natural gas production is piped to the town of Hillsborough and the city of Moncton, distribution in the latter place being handled by the Moncton Tramways, Ltd.

Development operations in New Brunswick have differed from those in other Canadian provinces in that drilling has been carried on under an exclusive concession. Some 20 years ago the New Brunswick Petroleum Co. secured from the provincial government exclusive drilling rights on a large area of potential oil lands in and about Westmorland and Albert Counties. Later, this company interested Maritime Oilfields, Ltd., a British company. A few years ago the two companies were merged to form New Brunswick Gas & Oilfields, Ltd.

The early drilling developed a shallow production of high-grade oil in the lower reaches of the Petitcodiac and Memramcook Rivers. This production did not hold up; but drilling further afield gas was discovered, and the Stoney Creek gas field developed. Some years ago the D'Arcy Exploration Co., a subsidiary of the Anglo-Persian Oil Co., drilled a number of deep tests under an arrangement with New Brunswick Gas & Oil Fields, Ltd., but no important new areas were opened, and these operations were discontinued. Deeper drilling in the proven field has resulted in restored or even increased gas production from lower horizons.

There has been from the outset a small production of high-grade crude, largely collected from drips. The company was primarily interested in maintaining its gas production, and in recent years the crude oil production has been somewhat neglected. In 1927 the wells were given a six months' capacity test, in addition to which a considerable accumulation of crude was disposed of to the Imperial Oil, Ltd., plant at Halifax.

The annual production amounted to 7,643 bbls. in 1923; but the 1927 production reached 22,912 bbls., and could probably have been still further increased had the test been continued beyond the first six months. The 1928 production, under normal conditions, went back to 7,164 bbls.

Marketing of this crude has seriously engrossed the attention of the company, and the capacity test was partly made to determine whether the available production was sufficient to justify local refining. It is claimed the crude produces an exceptionally high-grade lubricant, but that its full values cannot be secured unless it is refined alone or in conjunction with other crudes of the same grade. Analysis of the crude shows the following:

Specific gravity, 0.8392; flash point, 68 degrees Fahrenheit; cold test, 18 degrees Fahrenheit; sulphur, .04 per cent; calorific value, B.t.u., 20,504; benzine (specific gravity 0.717), 14 per cent; burning oil (specific gravity 0.795), 37.60 per cent; lubricating oil, 40.46 per cent; paraffin wax, 1.9. per cent; coke and loss, 6 per cent.

It is estimated that if satisfactory facilities for utilizing the crude were available, a production around 100 bbls. a day or more than four times the present production could be secured from the existing field; and if local utilization is undertaken, the output will be utilized to capacity.

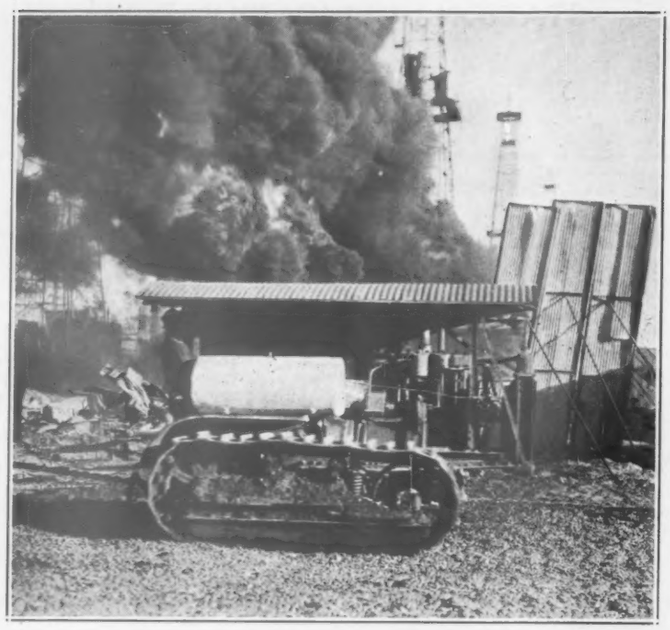
In the meantime, attention is being largely concentrated on natural gas production. The 1927 production was trifle lower than in 1926, but the 1928 production showed a daily increased open flow of 4,000,000 feet. The field appears to be holding its own very well, considering it has been in production for 20 years. The natural gas output, at the well's mouth, in 1927 was valued at $125,295.88; and in 1928 at $126,269.51. While a certain measure of depletion is noticeable in old wells, deepening and new drilling have offset this, while the possibilities of extending old fields, or opening new fields, in the concession cannot be regarded as exhausted.

In 1927 five wells were deepened or newly opened, resulting in a new daily open flow of 3,350,000 feet. In 1928 five old wells were cleaned out, three were deepened, and four new wells were put down, the new production giving a gain of 4,000,000 feet a day after offsetting all loss through depletion.

The only recent drilling operations of a purely exploratory nature were near Gautreau, where the D'Arcy Exploration Co. put down a hole in 1921. The new test by the New Brunswick Gas & Oilfields, Ltd., was drilled 3,460 feet northwest of the D'Arcy well. One of its objects was to determine the limits and dip of a salt-bearing area discovered in the D'Arcy test. At last reports No. 2 was still unfinished, but indications were it was outside the limits of the field.

Figures compiled by the New Brunswick Department of Lands and Mines show that since operations were started about 1909, the successive companies have spent in development an aggregate of $1,909,769.03. To offset this they have secured production of oil and gas valued at $1,973,328.62. Of this amount, $1,735,434.81 has been natural gas and crude oil production, aggregating 92,346 bbls., was valued at $237,893.81. Royalties to the provincial government paid by the operators in this period have amounted to $98,666.33. In 1927 the development outlay amounted to $124,159.43 and the production was valued at $165,432.85, while royalties were $8,271.63. In 1928 the development outlay was $108,834.93, the production value $141,633.11, and the royalties to the government $7,081.65.

CATERPILLARS HELP TO PREVENT SPREAD OF FLAMES



Another picture of the disastrous fire at Santa Fe Springs showing how Caterpillar tractors with asbestos-covered gas tanks were used to prevent fire-spread by dragging out stalled trucks, pulling down derricks, hauling fire-extinguishing material, etc. The flames are estimated to have inflicted $4,000,000 loss.

TIM CUSHING DIES

Tim Cushing, veteran oil man of Oklahoma, died August 8, as a result of a heart attack while driving his car.

Mr. Cushing had been a resident of Bristow for 10 years, going there from Tulsa in 1919. He was president of the Tim Cushing Tool Supply Co. and had been in some phase of the oil business since he was 10 years old. He was born in Ontario, Canada, December 25, 1861, and was reared in the oil fields of Pennsylvania.

LINE TO FRESNO

SAN FRANCISCO, Calif., Aug. 10.—The Pacific Gas & Electric Co. has been granted a certificate of public convenience and necessity by the State Railroad Commission to construct 60 miles of line to transmit natural gas from the Kettleman Hills to Fresno. The line will cost $600,000 and will be capable of delivering 11,000,000 feet of gas daily.

DIXIE GAS & UTILITIES

Dixie Gas & Utilities Co., which is controlled by United Gas Co., will offer common stockholders of record August 31 the right to subscribe to one new share of no-par common stock at $12.50 for each three common shares now held. Rights expire September 20. There were 201,760 common shares outstanding on June 30.

EXPLOSION KILLS FIVE

WILMINGTON, Calif., Aug. 13.—An oil worker was killed outright, four companions died within four hours from burns and one more was not expected to live as a result of an explosion in a cracking still of the Shell Oil Co. here Tuesday. The terrific blast was generated by gasoline fumes escaped from a broken line in a "hot" room of the still in contact with the 700-degree Fahrenheit heat.

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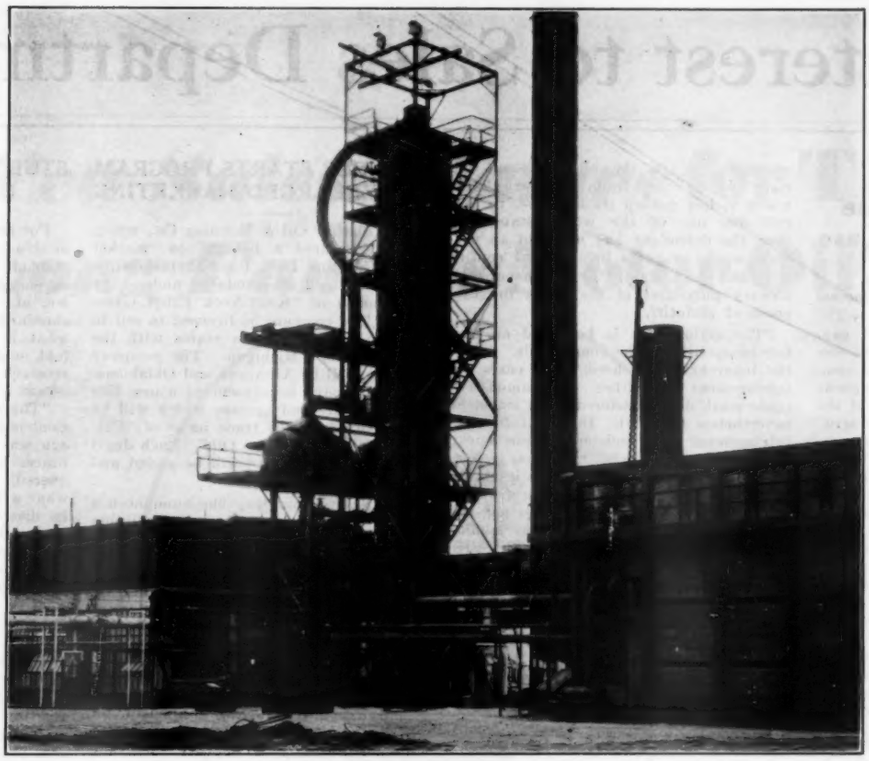

10,000 Barrel Skimming Plants

A skimming plant designed to have a through put of 10,000 barrels per day is shown in the above photograph. The plant was completely designed and erected ready for operation by the Foster Wheeler Corporation.

The fractionating tower shown in the center is arranged for the continuous removal of gasoline as an overhead vapor stream, gas oil as the side stream and fuel oil bottoms. Provision is made in the construction of the tower for the removal of additional side streams in case lubricating oils are desired.

The Foster tube still is shown at the right, with heat exchangers, coolers and pump house at the left of the tower.

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FOSTER WHEELER

Of Interest to Sales Departments

Court Protects Use Of "Standard" Name In Injunction Case

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 12.—The name "Standard Service Station" cannot be made use of when it tends to create confusion in the identity of the company so using it as to make it appear that it indicates a service station of the Standard Oil Co. If the word "standard" is used at all it must be in a way to prevent any possibility of confusion.

In the case of the Standard Oil Co. against T. A. Michie the district court for the Eastern District of Missouri enjoined the defendant from the use of a name similar to that of an established firm doing the same kind of business.

The opinion of the court held that while the action was based on unfair competition and evidence was introduced to show that defendant engaged in a studied effort to so simulate the business of the plaintiff as to cause confusion, yet the wrong committed "as in cases on infringement of either a common law trade mark or a registered trade mark, is nevertheless identical." The plaintiff having the exclusive use of the word, the defendant had no right to use the word so as to bring about confusion.

In this case both the defendant and the plaintiff have retail stations for the sale of gasoline and oil in the town of Steele in Pemiscot County, Missouri. In 1921 the defendant became an agent of the Standard Oil Co. at Steele, Mo., and later constructed a filling station and painted thereon two certain signs, states the opinion rendered in this case. These two signs each bore the words "Standard Service Station." The background and letters of these signs were repainted some two years ago in similitude of the color scheme of the plaintiff. The pumps, or some of them, of the defendant are painted similarly and in the same colors used by the plaintiff.

"Numerous instances of confusion of defendant's business with that of plaintiff," the court says, "was shown on the trial. There was much evidence that the name 'Standard,' or that word when used in connection with the gasoline and lubricating oils business, has been lifted from the public domain and has taken on a secondary meaning, as wholly applicable to plaintiff and its business, and that the word 'Standard' is generally understood in such business, as referring to plaintiff's goods.

"Defendant contends that he uses the word in the name and style of the business carried on by him as indicative of the class of service which he holds himself out to the public as capable of rendering, and of the service which he does render; that is, that his services and his products, or the products sold by him, are up to date; that they measure up to the criteria established by the Bureau of Standards (and that such Bureau establishes standards of prescribed excellence with regard to gasolines and similar products, which, of course, it does not), and that thus he uses the word in its ordinary sense, or so-called dictionary sense, and not otherwise. And that all this has been done by him without any intent to benefit from the advertising and name of plaintiff in the trade in which both parties are engaged."

The court holds that it cuts no decisive figure in the case whether defendant's intent here was good or bad; that is to say, as to whether he was engaged in a studied effort so to simulate the business of plaintiff as that confusion would be brought about, and that he would financially profit from such confusion. If plaintiff has, in the oil business, the right within the trade territory into which it has pushed its business, to the exclusive use of the word 'Standard,' then the defendant has no right to use such word, so as to bring about confusion, and the mistaking by the casual and unwary purchaser of his goods for the goods of plaintiff.

"The action here is bottomed on unfair competition," the court holds. "But the inherent wrong here, as in cases on infringement of either a common-law trade mark or a registered trade mark, is nevertheless identical. In a suit for the infringement of a registered trade mark, where notice to desist has been given, and notwithstanding such notice infringement has continued, proof of a fraudulent intent to injure plaintiff is not required. Such notice to desist is admitted here by defendant, as his frank testimony disclosed on the trial of the case.

"If plaintiff by more than 30 years' use of the word 'Standard' has caused this word to be lifted from the public domain and to be applied and understood in the oil business as designating its business, and its gasoline and oils, then no one has the right to use this word in such

(Continued on Page 160)

TEXAS MARKETERS MEET

The convention of the Texas Petroleum Marketers Association will be held at San Antonio, Tex., October 3,4 and 5, according to announcement by L. H. Flinn, executive secretary and counsel. The convention will be held at the Hotel Plaza. A program for the meeting is now being prepared. Headquarters for the association are 915 Second National Bank Bldg., Houston.

SHAFFER STARTS PROGRAM FOR ENLARGED MARKETING

The Shaffer Oil & Refining Co., which recently secured a license to market Ethyl Gasoline from the Ethyl Gasoline Corp., will sell its product under the trade name of "Kant-Nock Ethyl Gasoline." The company is licensed to sell in all the Middle Western states with the exception of Michigan. The company will also sell in Arkansas and Oklahoma.

The company is introducing a new line of motor oils and greases which will be marketed under the trade name of "Certified Deep Rock Prize Oil." Each drum of these new products will be sealed and registered by the company.

The Shaffer company has announced a contest to obtain a name for its aviation gasoline which is to be distributed among the larger airports. The contest is confined to those connected with the aviation industry. The award will be announced October 15.

STANDARDIZE EQUIPMENT

NEW YORK, Aug. 12.—Plans for standardizing the fueling equipment for airplanes at all airports and the setting up of an agency to approve fuels and lubricants by name rather than by specification will be considered by the manufacturers of fuels and lubricants at a meeting of the Aeronautical Chamber of Commerce in Cleveland August 28. Committees representing the fuel and lubricant interests will meet with aircraft engine manufacturers August 26 and with air transport operators August 27 to determine the basis for their considerations and report on the 28th.

STUDY PERFORMANCE OF GASOLINES IN ENGINES

For several years the Society of Automotive Engineers has been working through the Bureau of Standards toward developing constant factors in the problem of vaporization that will aid us in standardizing gasolines and in visualizing what is happening in the engine manifold, said H. L. Horning, chairman of the research committee of the society at its recent semiannual meeting.

"The proper burning of the fuel in the combustion chamber, which a few years ago was a problem of paramount importance, has been almost completely conquered. Perhaps few engineers realize what a tremendous and intricate problem in distribution is involved. No matter how well deisgned the combustion chamber is, what the compression is, or the mechanical efficiency, so long as the distribution is faulty a striking difference in relative efficiency between the four-cylinder and six-cylinder engine will remain.

"The needed improvement in design which is of paramount interest to the industry," continued Mr. Horning, "must be based on a thorough knowledge of the relation between fuel volatility and engine characteristics. It is the solution of this problem, with its bearing on further development, particularly of the six-cylinder and the eight-cylinder engine, that has prompted the long and tedious researches at the Bureau of Standards.

"In the course of the co-operative fuel research, an apparatus has been developed for measuring acceleration in the laboratory. I believe that, with this equipment, the car companies, improving it in their own way, will be able to develop acceleration in the car or in an engine in less than three weeks.

"This undertaking has furthermore constituted a unified movement of the petroleum and automotive industries toward a greater value to the public in the utilization of gasoline. Gasoline quality has improved and many cars weighing 5,000 pounds are now making the gasoline mileage that the Ford car used to make before this work was undertaken. At the inception of this research a great shortage of fuel was supposed to exist; today, the problem facing the automotive industry is how to cut down the quantity of fuel used per mile. The improvement of miles per gallon in cars, the technique that has been developed to accomplish it, and the change in standard specifications that makes possible a greater yield per barrel of crude are some of the many valuable results."

INDIANA COMPANY FILES PROTEST ON "RED HAT"

CHICAGO, Aug. 12.—Standard Oil Co of Indiana has filed with the patent office at Washington opposition to the registration of the words "Red Hat" as selected by the Independent Oil Men of America as a trade mark for the gasoline distributed by many of its members. The trustees of the I. O. M. A. have, according to S. Y. Hinchey, executive secretary, instructed their attorney to continue his efforts to secure the registration of their chosen brand as a trade mark as they contend that the words "Red Hat" are not confusingly similar to the trade mark "Red Crown."

In a notice to the members it is stated: "You recall that the previous objections made to the registration of our trade mark was the use of concentric rings which formed a part of the original drawing, which objectionable features have now been removed and we look forward to complete success in our efforts to secure this registration."

Who's Who
IN PETROLEUM REFINING AND MARKETING

By C. O. Willson

Sixteenth of a series of articles describing briefly the operations of the major refining and marketing organizations in the United States.

Sun Oil Company

The Sun Oil Co. is one of the oldest of the independent units which through consistent growth has become an important factor in refinery and marketing operations. Originally an eastern concern it has extended one or more phases of its operations to the Mid-Continent and Western fields with substantial holdings in South American countries.

Its refining and marketing operations are still largely confined to the territory east of the Mississippi River. The company operates three refineries as follows:

Location	Crude Oil Capacity Bbls. daily
Marcus Hook, Pa.	25,000
Toledo, Ohio	12,000
Yale, Okla	5,000
Total	42,000

The Toledo and Marcus Hook refineries are practically complete in their operations with a large output of lubricating oil at the latter refinery. The Yale refinery is a skimming plant. The Marcus Hook and Toledo refineries have cracking facilities.

Marketing

The policy of the Sun company has been to expand its marketing facilities to points economically served by its refineries. The fact that the Marcus Hook refinery is located on the seaboard enables the plant to serve a territory along the East Coast from Florida to New England states. The company has a number of ocean terminals extending from Jacksonville, Fla., to Providence, R. I.

The company also utilizes inland water transportation facilities along the coast. The company has built bulk stations along the New York state canal during the past six months. The Toledo refinery has the Great Lakes system for water transportation although as yet the water movement of products from that refinery has been small.

The company owned retail outlets are largely confined to Florida, New Jersey, Delaware, Pennsylvania, New York, Ohio and Michigan. In addition, the company has a large number of franchise dealer agreements. These dealers take practically all the products available in excess of company station requirements. The company has established a wide market for its lubricating oils through dealers.

At Tulsa, the Sun Co. of Oklahoma operates a number of service stations. These are the only company owned stations west of the Mississippi River. The Yale refinery which is also operated by the Sun Co. of Oklahoma furnishes the gasoline for the Tulsa stations and in addition supplies dealers in the Middle West and Southwest.

The company operates a fleet of tankers for the movement of crude oil to its coastal refinery and refined products to coastwise and export buyers. The company has export outlets in several European and South American companies.

A *New Sales Feature* for This *Long Famous* Motor Oil!

SEALED
in the drum

REGISTERED
by number

CERTIFIED
100% pure paraffine oil

Positive Protection for DEEP-ROCK Positive Lubrication

Now you can positively guarantee the unadulterated purity of DEEP-ROCK Prize Motor Oils . . . Every drum is sealed at the refinery, the contents certified and the drum registered by number, traceable (like registered mail). When you break the seal, you *know* you are the first to open the drum. When the drum is once emptied, it is scrapped.

This is a brand new sales feature and it is *exclusively* DEEP-ROCK.

You will sell more oil . . . you will increase your clientele and their confidence in you, if you offer them this "Positive Protection."

Whether or not you now have a DEEP-ROCK franchise, *write us*, we'll have a DEEP-ROCK representative call and show you how to take advantage of the new sealed and registered drums.

15, 30 and 55 gallon drums, Certified, Sealed and Registered

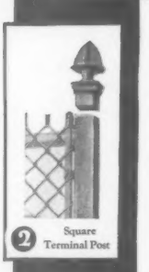
SHAFFER
OIL and REFINING COMPANY
General Sales Offices: 300 West Adams Street, Chicago

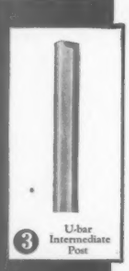
ANCHOR Fences

Investigate these money-saving fence features . . . .

BEFORE you buy a fence for your property—get the facts regarding the four exclusive Anchor Fence Features illustrated. They mean greater strength and durability—longer fence life—*low cost-per-year fence service.*

Anchor Chain Link Fences are designed throughout to outlive the wear, tear and strains of oil property service. (1) The gates are made with frames of square, tubular steel, *arc-welded* at the corners. (2) Special square, tubular steel is used for Terminal Posts—not ordinary round pipe. (3) To provide maximum strength, Intermediate Posts are U-shaped and rolled from high carbon steel. (4) Drive-Anchors insure firm post anchorage—gripping the soil like the roots of a tree.





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A local Anchor Fencing Specialist is nearby—ready to serve you. Phone or write him. He will gladly supply complete information regarding Anchor Fences and is equipped to furnish a complete fence advisory and erecting service.

Anchor Fences are made in types suitable for oil field lease camps, tank farms, refineries, pipe line pump stations and other oil industry properties.

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Sales Agents

Tulsa, Okla.—Dresser & Gorton, Inc., Mayo Bldg.
Houston, Texas—The DeBaun Company, 2112 Second National Bank Bldg.
Los Angeles, Calif.—J. E. Dwan, Inc., 616 S. Anderson St.
Shreveport, La.—R. M. Spurlock, 3306 Line Ave.
Branch Offices and Sales Agents in other cities Consult Telephone Directory

A NATION-WIDE FENCING SERVICE

SLIGHT DECREASE IN GASOLINE TANK WAGON QUOTATIONS AUGUST 1

On August 1, the average gasoline tank wagon price in the United States was reversed in its general upward trend and fell short of the average on July 1 by .16 cent. As a basis, the average net tank wagon price posted by the major marketing companies in The Oil and Gas Journal's 50 cities report is taken. While the amount of the change is small, it comes at a time when consumption is nearing a peak. The weaker refinery market has undoubtedly been the cause of the uncertainty shown in the retail market. At this time a year ago there was a very definite upward trend in both the retail and the refinery market.

On July 1, the average net price was 16.02 cents while on August 1 this was reduced to 15.84 cents. However, this year's price still remains above that of a year ago when the average was 15.74 cents. Conditions in the refinery market are not encouraging for the maintenance of this advantage for the balance of the year. A year ago the general refinery price on U. S. Motor gasoline in Oklahoma was about 9¼ cents. At present the same grade may be generally purchased at 7¼ cents, or 2 cents below that of a year ago. Approximately the same differential exists in other refinery and marketing areas.

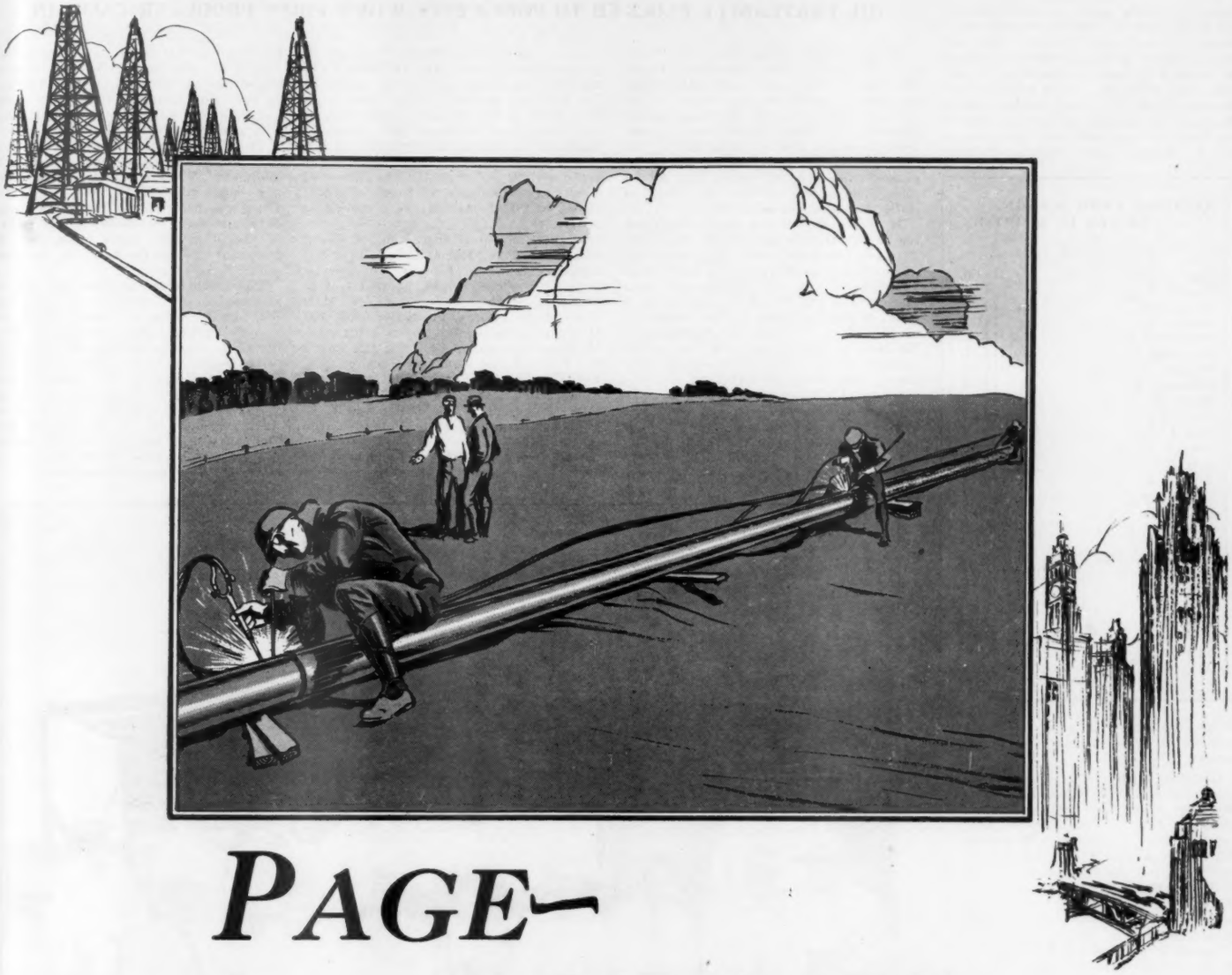
Similarly, a year ago the refinery price

(Continued on next page)

TANK WAGON PRICES EXCLUSIVE OF TAX IN 50 REPRESENTATIVE CITIES

	July 1	July price changes	Aug. 1	1928 High	1928 Low	1927 High	1927 Low	Tax 1928 Aug. 1
Birmingham, Ala.	18.0	16.0 (23)	16.0	18.0	14.0	18.0	14.0	4.0
Phoenix, Ariz.	14.0	....	14.0	18.0	14.0	19.0	16.0	4.0
Little Rock, Ark.	15.0	....	15.0	16.0	11.0	15.0	11.0	5.0
San Francisco, Calif.	17.0	....	17.0	14.0	14.0	14.0	9.0	3.0
Denver, Colo.	14.0	....	14.0	16.0	13.0	18.0	13.0	4.0
Hartford, Conn.	16.0	....	16.0	18.0	16.0	22.0	18.0	2.0
Dover, Del.	17.0	....	17.0	18.0	16.0	19.0	16.0	3.0
Jacksonville, Fla.	17.0	....	‡16.0	18.0	13.0	16.0	10.0	6.0
Atlanta, Ga.	18.0	16.0 (4)	16.0	18.0	13.0	18.0	10.0	4.0
Boise, Idaho	20.5	....	20.5	20.5	19.5	22.5	19.5	4.0
Peoria, Ill.	16.2	....	16.2	15.2	9.0	18.2	9.0	3.0
Chicago, Ill.	16.0	....	16.0	15.0	14.0	17.0	14.0	3.0
Indianapolis, Ind.	16.2	....	16.2	15.2	10.2	18.2	10.2	4.0
Des Moines, Iowa	16.5	....	16.5	15.5	11.9	16.0	9.9	3.0
Wichita, Kans.	14.8	....	14.8	13.8	10.8	15.8	10.8	3.0
Louisville, Ky.	16.0	....	16.0	16.0	13.0	17.0	13.0	5.0
New Orleans, La.	13.5	(26) 12.5 (29) 11.5	11.5	14.5	10.5	14.5	11.5	*5.0
Augusta, Me.	16.0	....	16.0	18.0	17.0	22.0	17.0	4.0
Baltimore, Md.	14.0	....	14.0	16.0	15.0	19.0	16.0	4.0
Springfield, Mass.	16.0	....	16.0	18.0	16.0	22.0	12.0	2.0
Detroit, Mich.	16.8	....	16.8	15.8	11.8	18.8	11.8	3.0
Duluth, Minn.	17.5	....	17.5	16.5	12.5	19.5	12.5	3.0
Natchez, Miss.	16.5	....	‡15.5	16.5	12.5	15.5	12.5	5.0
Kansas City, Mo.	15.9	....	15.9	14.9	10.9	17.9	10.9	*3.0
Helena, Mont.	20.5	....	20.5	20.5	19.5	22.0	19.5	5.0
Omaha, Neb.	16.25	....	16.25	15.25	13.25	14.25	12.25	4.0
Reno, Nev.	20.0	....	20.0	18.0	18.0	18.0	15.0	4.0
Newark, N. J.	14.0	....	14.0	16.0	15.0	19.0	16.0	2.0
Albuquerque, N. Mex.	16.0	....	16.0	17.0	14.0	20.0	16.0	5.0
New York, N. Y.	17.0	....	17.0	18.0	17.0	22.0	17.0	2.0
Charlotte, N. C.	14.0	....	14.0	17.0	15.0	18.0	16.0	5.0
Fargo, N. Dak.	18.9	....	18.9	17.0	12.0	20.0	12.0	3.0
Cleveland, Ohio	16.0	(26) 15.0 (2)	15.0	16.0	14.0	19.0	14.0	4.0
Tulsa, Okla.	10.0	11.0	11.0	14.0	10.0	15.0	10.0	4.0
Portland, Ore.	17.5	....	17.5	14.5	14.5	14.5	11.0	3.0
Philadelphia, Pa.	17.0	....	17.0	18.0	15.0	19.0	12.0	†4.0
Providence, R. I.	14.0	....	14.0	19.0	17.0	22.0	17.0	2.0
Charleston, S. C.	14.0	....	14.0	17.0	15.0	19.0	15.0	6.0
Huron, S. Dak.	17.3	....	17.3	16.3	14.5	19.5	11.5	4.0
Memphis, Tenn.	13.0	....	13.0	16.0	12.0	15.0	10.0	5.0
Dallas, Tex.	13.0	....	13.0	14.0	9.0	13.0	10.0	4.0
Salt Lake City, Utah	18.5	....	18.5	18.5	16.5	20.5	16.5	3.5
Burlington, Vt.	15.0	....	15.0	18.0	17.0	22.0	17.0	4.0
Norfolk, Va.	14.0	....	14.0	16.0	14.0	18.0	16.0	5.0
Washington, D. C.	14.0	....	14.0	16.0	15.0	19.0	16.0	2.0
Charleston, W. Va.	14.0	....	14.0	17.0	15.0	18.0	16.0	4.0
Milwaukee, Wis.	16.1	....	16.1	15.1	13.1	18.1	13.1	2.0
Casper, Wyo.	17.0	....	17.0	16.0	14.0	18.0	14.0	4.0
Seattle, Wash.	17.5	....	17.5	14.5	14.5	14.5	11.0	3.0
Minneapolis, Minn.	17.2	....	17.2	16.2	11.0	15.2	11.1	2.0
Average price	16.02	....	15.84	16.54	13.54	18.15	13.55	3.69

*State tax 2 cents, remainder city tax. †Paid by dealer. ‡Changed August 1.



PAGE—

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Pipe line welding demands mile on mile of perfectly welded joints. Contractors have found Page Welding Wire gives better welds at lower cost because of its uniform quality. Every lot is made to an exact analysis and carefully processed to assure uniform quality. Nothing is left to chance. Both flame tests and shop tests are made. Each wire and bundle is plainly marked. Samples on request.

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FLAME-TESTED **PROCESSED** SHOP-TESTED

Welding Wire and Electrodes

mounted to 9¾ cents in Oklahoma by the latter part of August and was maintained at that point for more than two months when it then gradually reduced to about 8¾ cents at the close of the year. This relatively strong refinery market supported the retail market during the high consumption period and marketers could not profitably cut prices in order to increase their volume of sales.

AVERAGE TANK WAGON PRICES IN 50 CITIES

(Exclusive of Tax)

July 1, 1927	14.86
August 1	14.89
September 1	14.62
October 1	14.39
November 1	14.32
December 1	14.21
January 1, 1928	14.29
February 1	14.33
March 1	14.71
April 1	14.81
May 1	15.02
June 1	15.22
July 1	15.29
August 1	15.74
September 1	16.04
October 1	16.34
November 1	16.28
December 1	15.98
January 1, 1929	16.00
February 1	15.11
March 1	14.73
April 1	14.90
May 1	14.94
June 1	15.80
July 1	16.02
August 1	15.84

With a margin of 2 cents this year, the problem of price cutting is beginning to appear.

Gasoline taxes also show another advance for August 1. The average on that date was 3.69 cents compared with 3.53 cents on July 1. This increase was the result of the adoption of a 3-cent tax in Illinois on August 1 and the increase in the Texas tax from 2 cents to 4 cents on July 16. These changes have been estimated to yield each of the two States approximately $2,500,000 in taxes monthly and brings the total tax collectable in all states close to $50,000,000 per month at the present rate of gasoline consumption.

ADDISON McPHERSON DIES

CHATHAM, Ontario, Aug. 10.—Addison McPherson died at Calgary recently in his 83rd year. Mr. McPherson, who came to Alberta as a young man, was a freighter, trader and mining prospector in the pioneer days, and later was connected with the early oil development, being connected with the Record Oil Co. which drilled one of the early deep tests in the south end of Turner Valley.

EASTERN FIELDS

Wells Completed in July

ALLEGANY FIELD

Wheaton, Dusenbury & Raymond	1
Hastings, Currie & Burns	1
Fee, G. N. Hill	2
Birtell, F. L. Putnam	2
Birtell, F. L. Putnam	4
Fee, Penn Pet. Co.	3
Coast et al, M. J. Crowley et al	5
Coast et al, M. J. Crowley et al	5
Coast et al, Messer Oil Corp.	5
Fee, McDivitt et al	2
Fee, M. J. Crowley et al	4
Fee, L. E. and O. W. Perry	2
Fee, Martin Bros. et al	2
Chas. Ames, O. A. Eastman et al	2
Fee, Chas. Phillips	1
J. E. Karl et al, Karl-Weller Oil Corp.	1
J. E. Karl et al, Karl-Weller Oil Corp.	1
Fee, C. M. and F. J. Lippert	1
Fee, Ryder & Richmond Oil	1
Fee, Ryder & Richmond Oil	1
Fee, Ryder & Richmond Oil	1
Fee, Ryder & Richmond Oil	1
Fee, Jacob Meridan et al	3
Fee, N. V. V. Franchot	15
Fee, N. V. V. Franchot	1
Fee, F. H. Stephan	5
Fee, Jacob Meridan et al	1
Fee, C. M. and F. J. Lippert	1
Wells completed	28
Production	74

OIL FRATERNITY FLOCKED TO PONCA CITY WHEN FIRST PRODUCER CAME IN

PONCA CITY, Okla., Aug. 10.—(Special)—The oil fraternity flocked to Ponca City back in 1910, when news spread that the first oil producer had come in just south of this city in the old Ponca Indian Reservation. They came to see if it was really true and then to shake hands with "Ernie" Marland and his associates because it was true. Of course they sat for their picture and all wore the brand of smile that does not wear off.

It was a momentous time—the bringing in of the first oil well in the entire northern Oklahoma area. This first well was drilled in by Marland, the late George L. Miller of the 101 Ranch and their associates on the Willie Cry Indian allotment, at a point about 2 miles southwest of this city. It was the beginning of Marland, of McFadden, of Wentz, of McCaskey and of the various others associated with them at that time.

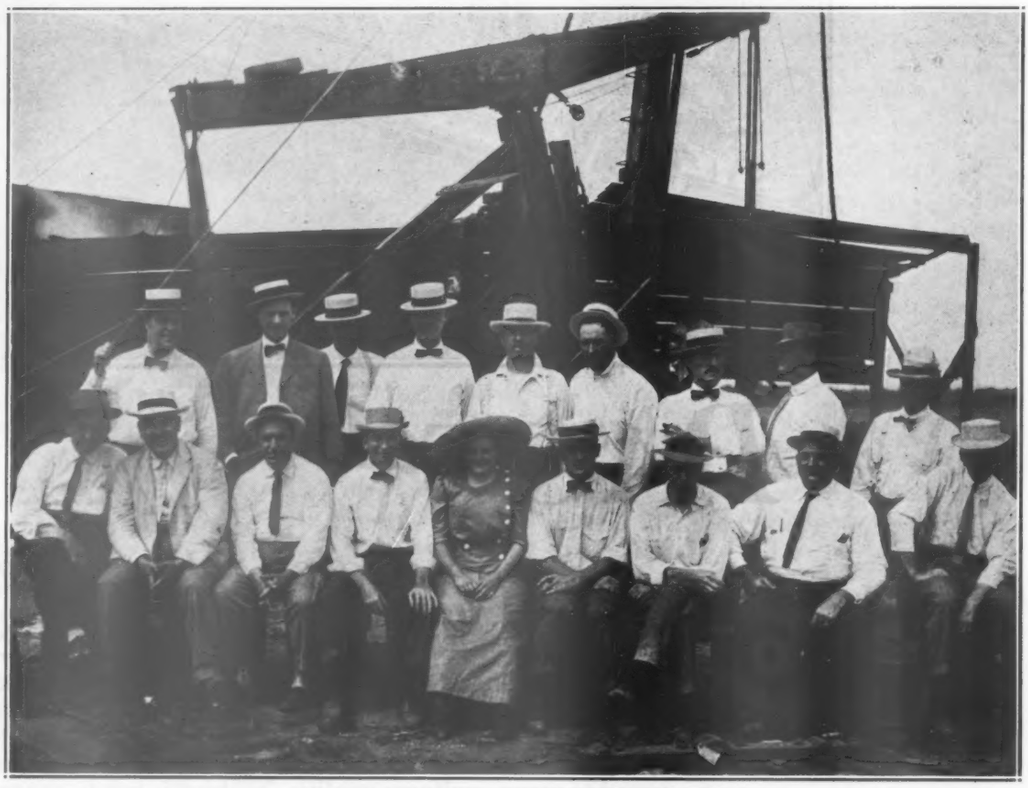
George L. Miller in fact was the original oil man in the northern Oklahoma area. He talked oil and made attempts to get a test drilled in the ranch vicinity prior to any other individual or concern getting into the game here. Later developments showed that Miller was right in his prognostications. The 101 Ranch Oil Co. was the predecessor of all others in the northern portion of the State at a time when it was 50 to 75 miles west of production and which oil men generally considered a joke so far as being oil territory was concerned. But George Miller kept insisting and eventually he interested Lieut. Frank Kenney, U. S. A., then stationed at Oklahoma City as a recruiting officer.

It just happened that Kenney was a cousin of E. W. Marland, back in Pittsburgh, Pa., where Kenney had been a newspaper reporter, and he told George Miller about Marland; also he told Marland about George L. Miller, the 101 Ranch and the possibilities of getting oil. Marland came out in 1909, the 101 Ranch Oil Co. was made a thing for certain, and the first test was drilled near the White House, the 101 Ranch headquarters. It was dry. The driller was V. E. Waldo, still prominent as a drilling contractor here.

Later William H. McFadden, later senior vice president of the Marland Oil Co., John G. McCaskey, sauer kraut king, Lew Wentz and Joseph Weaver, who had dipped into the oil game in West Virginia, as had also Marland, became interested and gradually joined the others at Ponca City and the 101 Ranch.

The first oil that was produced in commercial quantities was on the Willie Cry allotment. When it was reported, the entire community went wild, of course. That was back in the horse and buggy days, and every available rig was secured so that the town folks could visit the allotment and see the actuality for themselves.

The unearthing of the old picture, showing the oil fraternity of those days with their smiles on, has recalled that eventful period. The naming of all of them was accomplished by R. A. Griffith of the Sinclair Oil Co., Tulsa. The most of them are still in the game in some capacity, many of them still active, and so far as known only three are deceased: Scott Murdock, F. S. Henry and John McCaskey, who was Lew Wentz' partner in the old McCaskey-Wentz Corp., now carrying the name of Wentz only.



Top row, reading from left to right: Thomas White, brother of Pat White of the old firm of White & Harry Sinclair; John G. McCaskey, former partner of Lew Wentz; J. F. Donahue, who was a Tulsa royalty buyer in those days; Dick Gray, of the Prairie Oil & Gas Co., Tulsa; W. P. Thompson, of Bradford, Pa., now 83 years old; Von Waldo, of Ponca City, a contractor; Scott Murdock, scout at that time for The Texas Company, now deceased; Ross Ranney of Tulsa, now in the rig building business; George H. Brett, merchant, of Ponca City.

Bottom row, reading from left to right: Murray Doan, of Tulsa; Ernest Marland, of Ponca City; F. S. Henry, now deceased; R. A. Griffith, with Sinclair Oil & Gas Co., Tulsa; Nell Stoppard of Tulsa, reporter at that time for The Oil and Gas Journal, now Mrs. Homer Gray of Tulsa; William Black, drilling contractor of Tulsa; Hugh King, oil producer, Tulsa; Al Braymer, at that time production superintendent for Gypsy Oil Co., now drilling contractor of Tulsa; Bob Hileman, with Mid-Continent Petroleum Corp., of Tulsa.

COURT PROTECTS USE OF "STANDARD" NAME

(Continued from Page 156)

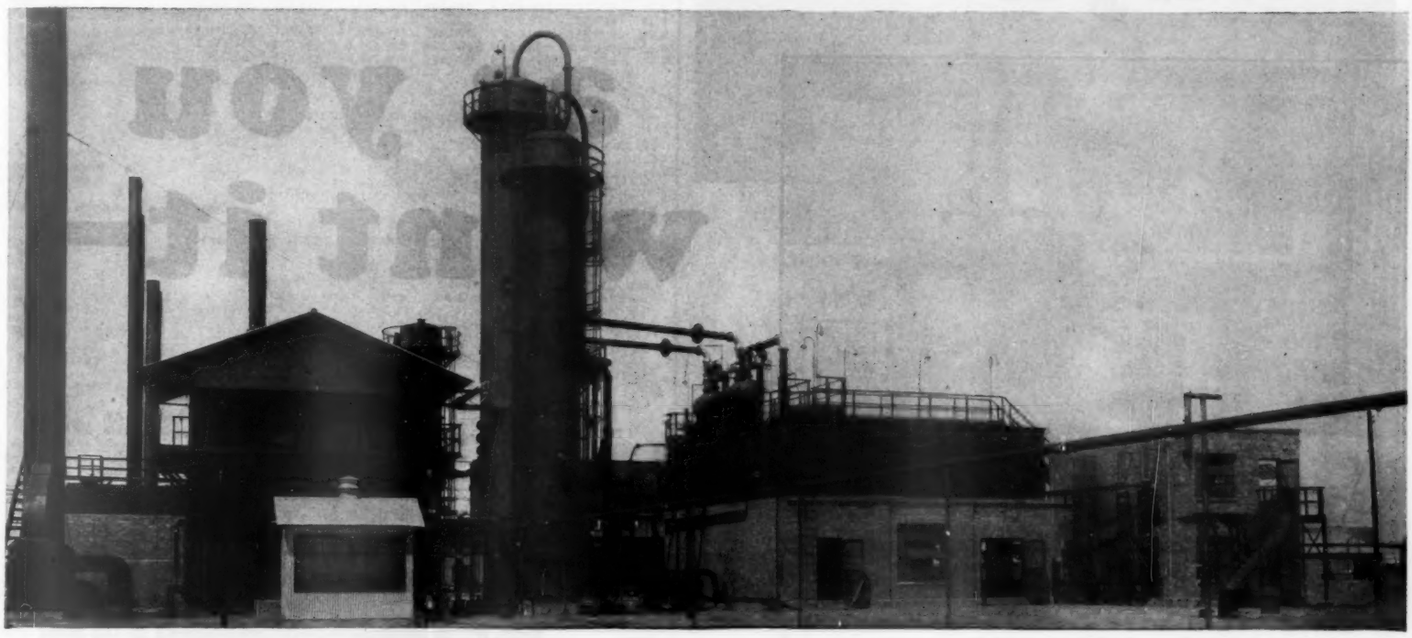
wise as to cause confusion among customers. Not only does the proof show such lifting of the word 'Standard' from the public domain, but the situation is such as at least to fall in the twilight zone as between evidence of the fact and judicial notice of the fact. Not only is actual confusion banned by the rule, but probability from the facts that such confusion will occur, that is to say, are the facts shown in evidence calculated to produce confusion? There is no better evidence of such probability of confusion than the mere fact that more than a hundred persons have been confused and led to visit defendant's station and there attempt to buy the products of plaintiff."

WELDING SOCIETY GIVES OUT ITS FALL PROGRAM

Subjects of interest to the oil industry will be discussed at the fall meeting of the American Welding Society to be held in Cleveland, Ohio, September 9 to 13, with morning sessions in the Hotel Statler and afternoon sessions in the Cleveland Public Auditorium. Exhibits will be displayed in the auditorium also.

W. R. Ost, Air Reduction Sales Co., will present a paper on "Oxyacetylene Welding of Pipe Lines in the Field"; H. C. Price, Welding Engineering Co., "Welding of Pipe Lines": J. H. Smith, University of Pittsburgh, "Stress Strain Characteristic of Welded Joints"; Elmer A. Sperry, Sperry Development Co., "Non-Destructive Tests of Welds;" W. F. Buchanan, Bessemer Gas Engine Co., "Cutting and Welding Steel Parts to Replace Castings"; H. A. Woofter, Swift Electric Welder Co., "Welding of Tubing and Pipes for Locomotives and Boilers."

Continued rapid expansion of welding applications, backed by extensive research activities, is revealed in the complete program which is being distributed by P. W. Swain, chairman of the meetings and paper committee.



• • • THIS pipe still, capacity 5000 barrels per day, is a unit of the complete refinery, designed and erected by Graver for the Burford Oil Co., Pecos, Texas.

¶Some of the characteristic features of this still are—efficiency of fractionating equipment; sulphur compounds removed by special treatment in the vapor phase; radiant heat type furnace with flue gas recirculation; special designed receiving equipment.

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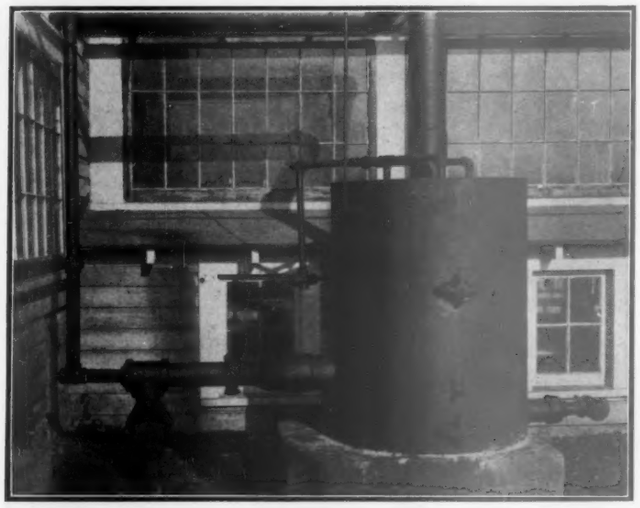
Plant — East Chicago, Indiana

—adjust it to work as you want it—



Since the lubricant in Barco Lubricated Plug Valves is not depended upon to relieve the pressure of the plug in the body, any degree of ease of operation is obtainable simply by adjusting the packing gland. The lubricant is only for preventing wear and to insure easy turning at all times.

Another labor-saving feature of this valve is the retainer ring (see cross-section cut) which prevents the plug from blowing out in the event it is found necessary to repack the valve under line pressure. Sudden shocks do not unseat the valve.

Barco Valves outlast the pipe lines in which they are installed, and maintenance is negligible. Ask for our latest catalog, containing valuable valve data.

Upper picture: Barco Valves on tank used to remove scale from gas lines. They clean themselves each time they are turned.

Lower picture: Cross-section of flange end Barco Plug Valve.

Barco Manufacturing Company
1801 Winnemac Avenue, Chicago, Illinois
Agents:
Vinson-Canter Co., Tulsa, Oklahoma
M. N. Dannenbaum Co., Houston Texas
The Steam Supply & Rubber Co., Seattle, Washington
Greene Brothers, Wichita Falls, Texas
Herbert Wolcott, El Paso, Texas

BARCO

Valves and Joints

O&GJ 8-15 Gray

BUREAU OF MINES STATISTICS, JUNE, 1929

PRODUCTION AND GRAVITY

(Barrels of 42 U. S. gallons)

	June, 1929 Total	June, 1929 Daily av.	May, 1929 Total	May, 1929 Daily av.	June, 1928 Total	June, 1928 Daily av.	Av. grav.
Seminole	12,262,000	409,000	12,568,000	405,000	8,298,000	277,000	39.0
St. Louis, etc.	.....	.....	.....	.....	680,000	227,000	40.0
West Texas	11,335,000	378,000	11,671,000	376,000	9,483,000	316,000	30.0
Long Beach*	5,071,000	169,000	5,431,000	175,000	5,831,000	194,000	26.0
Santa Fe Springs*	7,124,000	237,000	5,630,000	182,000	1,116,000	37,000	33.0

*From American Petroleum Institute.

STOCKS AT SEMINOLE-ST. LOUIS, ETC.

(Barrels of 42 U. S. gallons)

	June 30, '29	May 31, '29	June 30, '28*
Producers' stocks	584,000	568,000	364,000
Tank-farm stocks	18,156,000	18,528,000	17,631,000
Total stocks	18,740,000	19,096,000	17,995,000

*Includes stocks at Seminole only.

RECORD OF WELLS, JUNE, 1929*

	Completions: Oil	Gas	Dry	Total initial production (bbls.)	Average initial production (bbls.)	Drilling June 30
Seminole	77	4	13	52,500	700	261
St. Louis, etc.	..	..	..	.....	....	...
West Texas	39	..	25	92,400	2,400	229
Long Beach	11	..	1	6,100	600	91
Santa Fe Springs	22	..	..	102,300	4,700	152

*From The Oil & Gas Journal.

ANALYSIS OF SUPPLY AND DEMAND OF ALL OILS

(Including wax, coke and asphalt in thousands of barrels of 42 U. S. gallons)

	June, 1929	May, 1929	June, 1928	Jan.-June 1929	Jan.-June, 1928
NEW SUPPLY:					
Domestic production:					
Crude petroleum:					
Light	75,390	76,009	64,940	439,466	388,592
Heavy	8,013	8,406	7,586	48,649	46,972
Total crude	83,403	84,415	72,526	488,115	435,564
Natural gasoline	4,250	4,343	3,355	24,900	20,493
Benzol	257	267	231	1,526	1,379
Total production	87,910	89,025	76,112	514,541	457,436
Daily average	2,930	2,872	2,537	2,843	2,513
Imports:					
Crude	6,591	7,552	6,553	43,852	38,006
Refined	2,426	2,732	712	11,073	6,909
Total new supply all oils	96,927	99,309	83,377	569,466	502,351
Daily average	3,231	3,204	2,779	3,146	2,760
Increase in stocks all oils	4,974	3,726	*776	45,020	25,999
DEMAND:					
Total demand	91,953	95,583	84,153	524,446	476,352
Daily average	3,065	3,083	2,805	2,897	2,617
Exports:†					
Crude	2,615	1,932	1,879	11,495	8,680
Refined	12,383	10,928	12,284	65,689	69,670
Domestic demand	76,955	82,723	69,990	447,262	398,002
Daily average	2,565	2,668	2,333	2,471	2,187
Excess of daily average domestic production over domestic demand	365	204	204	372	326
STOCKS (end of month):					
Crude petroleum:					
East of California:‡					
Light	333,102	332,011	319,322	333,102	319,322
Heavy	45,987	47,531	51,890	45,987	51,890
California:					
Light	§32,667	29,088	19,197	§32,667	19,197
Heavy¶	§103,660	101,681	94,234	§103,660	94,234
Total crude	515,416	510,261	484,643	515,416	484,643
Natural gasoline at plants	1,356	1,390	648	1,356	648
Refined products	143,123	141,878	130,315	143,123	130,315
Grand total stocks all oils	659,895	653,529	615,606	659,895	615,606
Days' supply‖	215	212	219	228	235
Bunker oil (included above in domestic demand)	4,550	4,704	4,307	25,813	25,365

*Decrease. †Includes shipments to Alaska, Hawaii and Porto Rico. ‡Exclusive of producers' stocks. §On new basis. Corresponding figures for previous months to be supplied later. For May revisions see page 5. ¶Includes fuel oil. ‖Grand total stocks all oils divided by daily average total demand.

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (Barrels)

(From Bureau of Foreign and Domestic Commerce)

	June, 1929 Total	June, 1929 Dy.av.	May, 1929 Total	May, 1929 Dy.av.	Jan.-June, 1929	Jan.-June, 1928
Imports	6,591,000	219,700	7,552,000	243,600	43,852,000	38,006,000
From Mexico	1,624,000	54,100	1,281,000	41,300	5,917,000	8,346,000
From Venezuela	4,186,000	139,600	5,139,000	165,800	29,862,000	21,949,000
From Colombia	637,000	21,200	857,000	27,600	6,362,000	6,364,000
From other countries	144,000	4,800	275,000	8,900	1,711,000	1,347,000
Exports	2,615,000	87,200	1,932,000	62,300	11,495,000	8,680,000
Domestic crude oil:						
To Canada	2,248,000	74,900	1,729,000	55,800	9,366,000	6,799,000
To other countries	362,000	12,100	203,000	6,500	2,122,000	1,874,000
Shipments	5,000	200	.....	.....	7,000	6,000
Foreign crude oil	Not available		.....	.....	.....	1,000

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS (Barrels)

Domestic petroleum by fields of origin:	June, 1929 Total	June, 1929 Dy.av.	May, 1929 Total	May, 1929 Dy.av.	Jan.-June, 1929	Jan.-June, 1928
Appalachian	2,811,000	93,700	2,928,000	94,400	15,899,000	15,468,000
Lima-Indiana	236,000	7,900	259,000	8,300	1,138,000	728,000
Michigan	478,000	15,900	231,000	7,500	1,331,000	224,000
Illinois and S. W. Indiana	846,000	28,200	650,000	21,000	4,046,000	3,672,000
Mid-Continent	47,155,000	1,571,800	51,760,000	1,669,700	282,447,000	249,642,000
Gulf Coast	4,064,000	135,500	4,197,000	135,400	23,577,000	22,970,000
Rocky Mountain	2,317,000	77,200	2,327,000	75,100	13,793,000	14,584,000
Deliveries and exports	57,907,000	1,930,200	62,352,000	2,011,400	342,201,000	307,288,000
Deliveries	56,088,000	1,869,600	60,909,000	1,964,800	334,672,000	301,575,000
Foreign petroleum	6,660,000	222,000	7,554,000	243,700	43,897,000	37,947,000
Deliveries of domestic and foreign petroleum	62,748,000	2,091,600	68,463,000	2,208,500	378,569,000	339,522,000

NUMBER OF PRODUCING OIL WELLS COMPLETED*

June, 1929	1,316	January-June, 1929	7,079
May, 1929	1,191	January-June, 1928	5,527

*For states east of California from The Oil and Gas Journal; for California, from the American Petroleum Institute.

(Continued on next page)

This method of lighting loading racks

means one lamp to install, one lamp to replace if broken or burned out, one safe, gas-tight unit that lights up the whole works at once. Compare this with the cost and hazard of a string of small lamps.

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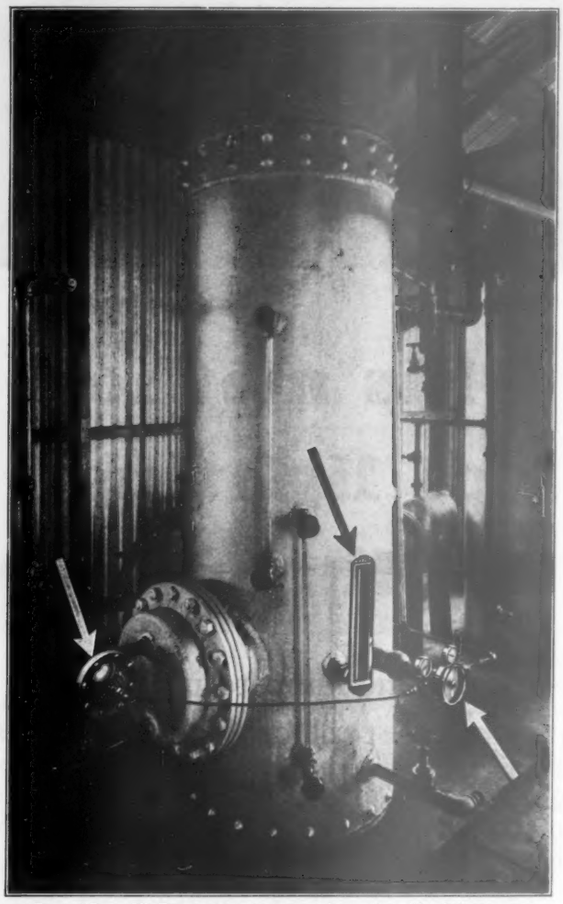

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EFFICIENT operation of gasoline fractionators or stabilizers is assured by *Tycos* Temperature and Pressure Regulators (Pilot Operated).

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Tycos
Temperature Instruments
Indicating Recording Controlling

PRODUCTION OF CRUDE PETROLEUM BY FIELDS AND STATES WITH CLASSIFICATION BY GRAVITY (Barrels at 42 U. S. gallons)

	June, 1929		May, 1929		Jan.-June,	Jan.-June,
FIELD:	Total	Dy.av	Total	Dy.av.	1929	1928
Appalachian	2,664,000	88,800	2,886,000	93,100	15,827,000	15,285,000
Lima-Indiana	152,000	5,100	134,000	4,300	746,000	861,000
Michigan	478,000	15,900	231,000	7,500	1,301,000	224,000
Illinois-S. W. Indiana	586,000	19,500	628,000	20,200	3,547,000	3,702,000
Mid-Continent	48,406,000	1,613,500	49,714,000	1,603,700	286,190,000	266,071,000
Gulf Coast	4,326,000	144,200	4,612,000	148,800	25,916,000	22,076,000
Rocky Mountain	2,166,000	72,200	2,157,000	69,600	12,603,000	14,384,000
California	24,625,000	820,900	24,053,000	775,900	141,985,000	112,961,000
United States total	83,403,000	2,780,100	84,415,000	2,723,100	488,115,000	435,564,000
STATE:						
Arkansas	2,944,000	68,100	2,230,000	71,900	13,317,000	16,314,000
California	24,625,000	820,900	24,053,000	775,900	141,985,000	112,961,000
Colorado	215,000	7,200	221,000	7,100	1,227,000	1,374,000
Illinois	515,000	17,200	550,000	17,700	3,082,000	3,253,000
Indiana	78,000	2,600	84,000	2,700	498,000	497,000
Southwestern	71,000	2,300	78,000	2,500	465,000	449,000
Northeastern	7,000	300	6,000	200	33,000	48,000
Kansas	3,791,000	126,400	3,793,000	122,400	19,814,000	20,249,000
Kentucky	546,000	18,200	635,000	20,500	3,420,000	3,554,000
Louisiana	1,590,000	53,000	1,632,000	52,700	9,802,000	10,807,000
Gulf Coast	557,000	18,600	567,000	18,300	3,550,000	2,916,000
Rest of State	1,033,000	34,400	1,065,000	34,400	6,252,000	7,891,000
Michigan	478,000	15,900	231,000	7,500	1,301,000	224,000
Montana	262,000	8,700	272,000	8,800	1,657,000	2,033,000
New Mexico	86,000	2,900	96,000	3,100	494,000	432,000
New York	282,000	9,400	289,000	9,300	1,610,000	1,201,000
Ohio	573,000	19,100	579,000	18,700	3,273,000	3,595,000
Central and Eastern	428,000	14,300	451,000	14,600	2,560,000	2,782,000
Northwestern	145,000	4,800	128,000	4,100	713,000	813,000
Oklahoma	20,688,000	689,600	21,743,000	701,400	127,104,000	117,530,000
Osage County	1,192,000	39,700	1,296,000	41,800	7,723,000	10,761,000
Rest of State	19,496,000	649,900	20,447,000	659,600	119,381,000	106,769,000
Pennsylvania	954,000	31,800	1,018,000	32,800	5,483,000	4,846,000
Tennessee	1,000	.....	2,000	100	11,000	22,000
Texas	24,619,000	820,600	24,928,000	804,100	142,069,000	123,247,000
Gulf Coast	3,769,000	125,600	4,045,000	130,500	22,366,000	19,160,000
Rest of State	20,850,000	695,000	20,883,000	673,600	119,703,000	104,087,000
West Virginia	453,000	15,100	491,000	15,800	2,743,000	2,880,000
Wyoming	1,603,000	53,400	1,568,000	50,600	9,225,000	10,545,000
Salt Creek	913,000	30,400	928,000	29,900	5,562,000	7,256,000
Rest of State	690,000	23,000	640,000	20,700	3,663,000	3,289,000
CLASSIFICATION BY GRAVITY (approx.):						
Light crude	75,390,000	2,513,000	76,009,000	2,451,900	439,466,000	388,592,000
Heavy crude	8,013,000	267,100	8,406,000	271,200	48,649,000	46,972,000

STOCKS HELD BY THE REFINING COMPANIES IN UNITED STATES, JUNE 30, 1929

	Gasoline (bbls.)	Kerosene (bbls.)	Gas oil and fuel oil (bbls.)	Lubricants (bbls.)
East Coast	6,327,000	1,333,000	7,006,000	2,523,000
Appalachian	1,522,000	279,000	964,000	1,215,000
Ind., Ill., Ky., etc.	6,586,000	748,000	2,794,000	626,000
Okla., Kans., Mo.	5,205,000	689,000	6,164,000	440,000
Texas	5,638,000	1,542,000	12,732,000	1,943,000
Louisiana and Arkansas	1,789,000	712,000	6,444,000	113,000
Rocky Mountain	2,494,000	212,000	1,228,000	161,000
California	11,900,000	2,833,000	.....	995,000
Total	41,461,000	8,348,000	*37,332,000	8,016,000
Total 5/31/29	44,648,000	7,742,000	*35,636,000	8,370,000
Texas Gulf Coast	4,532,000	1,408,000	9,373,000	1,898,000
Louisiana Gulf Coast	1,469,000	695,000	5,008,000	107,000

	Wax (lbs.)	Coke (tons)	Asphalt (tons)	Other finished products (bbls.)	Unfinished oils (bbls.)
East Coast	91,148,000	16,100	110,200	118,000	8,525,000
Appalachian	22,194,000	3,700	300	65,000	1,481,000
Ind., Ill., Ky., etc.	15,312,000	50,700	34,600	215,000	3,969,000
Okla., Kans., Mo.	9,722,000	87,800	3,700	63,000	2,104,000
Texas	10,779,000	182,000	9,400	12,000	11,817,000
Louisiana and Arkansas	17,370,000	56,100	29,900	71,000	2,610,000
Rocky Mountain	22,239,000	91,200	7,900	35,000	1,827,000
California	.....	10,800	51,100	171,000	†10,242,000
Total	188,764,000	498,400	247,100	750,000	42,575,000
Total 5/31/29	179,139,000	471,200	236,300	814,000	40,305,000
Texas Gulf Coast	10,436,000	166,400	9,300	6,000	10,634,000
Louisiana Gulf Coast	17,370,000	55,100	24,500	68,000	1,713,000

*East of California. †Includes 2,555,000 bbls. tops in storage.

COMPARATIVE ANALYSIS (THOUSANDS OF BARRELS OF 42 U. S. GALLONS)

	Runs to stills		Imports*		Exports*			Dom. demand	
Crude Petroleum—	Total	Dly. av.	Total	Dly. av.	Total	Dly. av.	Stks. end period	Total	Dly. av.
June, 1929	84,400	2,813	6,591	220	2,615	87	†411,756	.....	.....
May, 1929	84,420	2,723	7,552	244	1,932	62	††409,476	.....	.....
Jan.-June, 1929	480,843	2,657	43,852	242	11,495	64	†411,756	.....	.....
June, 1928	75,958	2,532	6,553	218	1,879	63	†390,409	.....	.....
Jan.-June, 1928	434,477	2,387	38,006	209	8,680	48	†390,409	.....	.....
	Production								
Gasoline—	Total	Dly. av.							
June, 1929	35,606	1,187	732	24	5,832	194	41,461	33,693	1,123
May, 1929	36,270	1,170	729	24	5,249	169	44,648	34,117	1,101
Jan.-June, 1929	206,578	1,141	3,515	19	28,996	160	41,461	172,702	954
June, 1928	30,703	1,023	212	7	4,808	160	34,862	29,469	982
Jan.-June, 1928	174,958	961	2,245	12	25,801	142	34,862	149,856	823
Kerosene—									
June, 1929	4,928	164	15	1	1,790	60	8,348	2,547	85
May, 1929	4,902	158	6	..	1,463	47	7,742	3,200	103
Jan.-June, 1929	27,914	154	105	1	10,318	57	8,348	18,354	101
June, 1928	4,849	162	24	1	1,655	55	8,432	2,323	77
Jan.-June, 1928	29,647	163	108	1	11,377	63	8,432	17,661	97
Gas Oil and Fuel Oil—									
June, 1929	37,338	1,245	1,660	55	3,375	113	§140,992	.....	.....
May, 1929	38,570	1,244	1,983	64	3,100	100	‡§137,813	.....	.....
Jan.-June, 1929	222,066	1,227	7,368	41	18,461	102	§140,992	.....	.....
June, 1928	35,765	1,192	468	16	4,238	141	§130,319	.....	.....
Jan.-June, 1928	204,602	1,124	4,495	25	23,625	130	§130,319	.....	.....
Lubricants—									
June, 1929	2,928	98	6	..	989	33	8,016	2,299	77
May, 1929	3,005	97	4	..	844	27	8,370	2,322	75
Jan.-June, 1929	17,223	95	20	..	5,651	31	8,016	11,916	65
June, 1928	3,009	100	1	..	1,095	37	7,832	2,143	71
Jan.-June, 1928	17,387	96	5	..	5,829	32	7,832	11,591	64
Wax (Thousands of lbs.)—									
June, 1929	52,714	1,757	3,070	102	24,986	833	188,764	21,173	706
May, 1929	53,783	1,735	2,748	89	18,662	602	179,139	29,417	949
Jan.-June, 1929	329,757	1,822	17,175	95	141,863	784	188,764	126,649	700
June, 1928	50,792	1,963	1,715	57	33,594	1,120	91,989	30,563	1,019
Jan.-June, 1928	314,118	1,726	10,787	59	220,437	1,211	91,989	163,117	896

*From Bureau of Foreign and Domestic Commerce, subject to revision. Exports include shipments to Alaska, Hawaii, and Porto Rico. †Includes California light crude. ‡Revised. §Includes California heavy crude and fuel oil.

(Continued on next page)

SERVING WEST TEXAS

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in Noodle Dome

IT IS A PROVEN FACT that ELECTRIC power drills FASTER—and costs LESS than any other form of power. But more important than speed and economy is its SAFETY. ELECTRICALLY driven motors eliminate dangers of fire from escaping gas when wells blow in unexpectedly, and ignite before old-fashioned boilers can be moved back or fires quenched.

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Port Tampa, Fla.
Mobile (Magazine Point, Ala.)
Philadelphia (Girard Point, Pa.)
Charleston, S. C.
Savannah, Ga.
New Orleans (Gretna, La.)
Port Arthur, Texas
Galveston, Texas

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES (Barrels)

AT REFINERIES (and in coastwise transit thereto.) Reported by location of storage:		June 30, 1929	May 31, 1929	June 30, 1928
East Coast:				
Domestic		8,202,000	9,367,000	8,409,000
Foreign		5,382,000	6,484,000	5,862,000
Appalachian		2,591,000	2,645,000	2,242,000
Indiana, Illinois, Kentucky, etc.		2,945,000	2,974,000	2,957,000
Oklahoma, Kansas and Missouri		6,216,000	6,034,000	5,662,000
Texas:				
Inland		2,578,000	2,464,000	1,927,000
Gulf Coast:				
Domestic		9,802,000	9,492,000	8,469,000
Foreign		533,000	344,000	102,000
Arkansas and Inland Louisiana		1,402,000	1,470,000	881,000
Louisiana Gulf Coast:				
Domestic		3,975,000	3,391,000	4,149,000
Foreign		1,649,000	1,818,000	970,000
Rocky Mountain		2,028,000	2,075,000	1,488,000
Total east of California		47,303,000	48,558,000	43,118,000
ELSEWHERE THAN AT REFINERIES:				
Domestic—Reported by field of origin:				
Appalachian:				
N. Y., Pa., W. Va., Eastern and Central Ohio:	Gross	4,930,000	4,993,000	6,361,000
	Net	4,652,000	4,711,000	6,064,000
Kentucky:	Gross	922,000	1,012,000	1,221,000
	Net	778,000	866,000	1,087,000
Lima-Indiana:	Gross	953,000	1,037,000	1,447,000
	Net	770,000	854,000	1,267,000
Illinois-S. W. Indiana:	Gross	11,525,000	11,786,000	12,702,000
	Net	10,868,000	11,128,000	12,200,000
Mid-Continent:				
Oklahoma, Kansas, Panhandle, Central, North and West Texas:	Gross	259,206,000	257,905,000	249,543,000
	Net	246,402,000	245,021,000	236,725,000
Northern Louisiana and Arkansas:	Gross	26,879,000	27,197,000	29,508,000
	Net	23,148,000	23,278,000	26,543,000
Gulf Coast:	Gross	21,197,000	20,893,000	17,525,000
	Net	20,643,000	20,381,000	17,028,000
Rocky Mountain:	Gross	24,349,000	24,501,000	27,078,000
	Net	24,311,000	24,462,000	27,038,000
Total pipe line and tank farm stocks east of California:	Gross	349,961,000	349,324,000	345,385,000
	Net	331,572,000	330,701,000	327,952,000
Foreign crude petroleum on Atlantic Coast		60,000	110,000	91,000
Foreign crude petroleum on Gulf Coast		154,000	173,000	51,000
Total refinery, pipe line and tank farm stocks of domestic and foreign crude petroleum east of California		379,089,000	379,542,000	371,212,000
CLASSIFICATION BY GRAVITY (approx.)				
East of California:				
Light crude (24 degrees and above)		333,102,000	332,011,000	319,322,000
Heavy crude (below 24 degrees)		45,987,000	47,531,000	51,890,000
California: Light		32,667,000	*29,934,000	19,197,000
Heavy (including fuel)		103,660,000	*102,177,000	94,234,000
PRODUCERS' STOCKS (not including above; approx.):				
East of California		7,500,000	7,450,000	.....
California		573,000	*1,559,000	.....

*Revised.

RUNS TO STILLS AND OUTPUT OF REFINERIES IN THE UNITED STATES, JUNE, 1929

Input—	Crude oil—Domestic	Crude oil—Foreign	Unfinished oils rerun	Natural gasoline	Total Input (b bls.)
East Coast	9,006,000	6,294,000	1,165,000	85,000	16,550,000
Appalachian	3,082,000	.....	108,000	46,000	3,236,000
Ind., Ill., Ky., etc.	9,464,000	.....	640,000	190,000	10,294,000
Okla., Kans., Mo.	9,904,000	.....	405,000	350,000	10,659,000
Texas	17,317,000	469,000	747,000	686,000	19,219,000
Louisiana and Arkansas	5,651,000	528,000	376,000	558,000	7,113,000
Rocky Mountain	2,222,000	.....	576,000	130,000	2,928,000
California	20,463,000	.....	*365,000	†1,503,000	22,331,000
Total United States	77,109,000	7,291,000	4,382,000	3,548,000	92,330,000
Daily average, 6/29	2,570,300	243,000	146,100	118,300	3,077,700
Daily average, 5/29	2,490,800	232,400	142,100	118,300	2,983,600
Texas Gulf Coast	12,069,000	469,000	611,000	530,000	13,679,000
Louisiana Gulf Coast	3,519,000	528,000	37,000	433,000	4,517,000

Output—	Gasoline (bbls.)	Kerosene (bbls.)	Gas oil and fuel oil (bbls.)	Lubricants (bbls.)	Wax (lbs.)
East Coast	4,735,000	765,000	8,026,000	889,000	21,964,000
Appalachian	1,387,000	311,000	634,000	496,000	8,280,000
Ind., Ill., Ky., etc.	5,518,000	491,000	2,925,000	321,000	5,448,000
Okla., Kans., Mo.	5,266,000	924,000	3,201,000	241,000	3,318,000
Texas	7,381,000	971,000	7,860,000	644,000	5,635,000
Louisiana and Arkansas	2,577,000	441,000	2,417,000	100,000	5,235,000
Rocky Mountain	1,406,000	158,000	600,000	47,000	2,834,000
California	7,336,000	867,000	11,675,000	190,000	.....
Total United States	35,606,000	4,928,000	37,338,000	2,928,000	52,714,000
Daily average, 6/29	1,186,900	164,300	1,244,600	97,600	1,757,100
Daily average, 5/29	1,170,000	158,100	1,244,200	96,900	1,734,900
Texas Gulf Coast	5,402,000	712,000	5,125,000	616,000	5,564,000
Louisiana Gulf Coast	1,872,000	393,000	1,210,000	83,000	5,235,000

Output (Continued)—	Coke (tons)	Asphalt (tons)	Other finished products (bbls.)	Unfinished products (bbls.)	Shortage (bbls.)
East Coast	15,600	171,300	265,000	137,000	632,000
Appalachian	3,800	1,800	28,000	133,000	188,000
Ind., Ill., Ky., etc.	37,000	37,900	198,000	260,000	176,000
Okla., Kans., Mo.	31,500	1,400	69,000	248,000	517,000
Texas	32,400	19,000	12,000	1,013,000	1,052,000
Louisiana and Arkansas	11,200	40,200	314,000	749,000	223,000
Rocky Mountain	11,200	1,900	25,000	555,000	45,000
California	11,100	53,400	263,000	*1,238,000	456,000
Total United States	153,800	326,900	1,114,000	4,333,000	3,283,000
Daily average 6/29	5,130	10,900	37,100	144,400	109,400
Daily average 5/29	4,580	10,160	32,100	109,400	87,100
Texas Gulf Coast	26,700	18,900	2,000	733,000	835,000
Louisiana Gulf Coast	10,500	34,900	306,000	308,000	85,000

Note—Wax, coke, and asphalt equivalent to 277.4 pounds per barrel and 5.20 and 5.54 bbls. per ton, respectively.

*Includes 836,000 bbls. net tops produced. †Includes 256,000 bbls. run through pipe lines.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES (Barrels)

	June, 1929	May, 1929	Jan.-June, 1929	Jan.-June, 1928
Crude oil	170,000	95,000	661,000	1,649,000
Refined products	1,753,000	1,583,000	11,922,000	9,320,000
Gasoline	1,598,000	1,498,000	10,314,000	7,289,000
Gas oil	79,000	79,000	1,448,000	1,082,000
Fuel oil	3,000	2,000	66,000	709,000
Lubricants	71,000	1,000	78,000	226,000
Asphalt	2,000	3,000	16,000	14,000

(Continued on next page)

The One fire is enough !

OIL INSURANCE ASSOCIATION

PROVIDES FOR REAL FIRE INSURANCE FOR THE OIL INDUSTRY — THROUGH ITS MEMBER COMPANIES

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Aetna Insurance Co., Hartford, Conn.
Alliance Insurance Co., Philadelphia, Pa.
Allied Underwriters Agency, Hong Kong
American Insurance Co., Newark, N. J.
American Alliance Ins. Co., New York, N. Y.
American Central Insurance Co., St. Louis, Mo.
American Eagle Fire Ins. Co., New York, N. Y.
Automobile Insurance Co., Hartford, Conn.
Ben Franklin Underwriters, Pittsburgh, Pa.
Boston Insurance Co., Boston, Mass.
Caledonian Insurance Co., Edinburg, Scotland.
California Insurance Co., San Francisco, Calif.
Camden Fire Insurance Association, Camden, N. J.
Carolina Insurance Co., Wilmington, N. C.
Central States Fire Ins. Co., Wichita, Kans.
Citizens Insurance Co., St. Louis, Mo.
City of New York Insurance Co., New York, N. Y.
Columbia Insurance Co., Jersey City, N. J.
Commerce Insurance Co., Glens Falls, N. Y.
Commercial Union Assurance Co., London, Eng.
Commercial Union Fire Ins. Co., New York, N. Y.
Commonwealth Insurance Co., New York, N. Y.
Concordia Fire Insurance Co., Milwaukee, Wis.
Connecticut Fire Ins. Co., Hartford, Conn.
Constitution Underwriters, Springfield, Mass.
Continental Insurance Co., New York, N. Y.
County Fire Insurance Co., Manchester, N. H.
Eagle Star & British Dom. Ins. Co., Ltd., London, Eng.
East & West Insurance Co., New Haven, Conn.
Federal Union Insurance Co., Chicago, Ill.
Fidelity-Phenix Fire Ins. Co., New York, N. Y.
Fire & Marine Underwriters, Hartford, Conn.
Fireman's Fund Ins. Co., San Francisco, Calif.
Firemens Insurance Co., Newark, N. J.
Firemens Underwriters, Newark, N. J.
Franklin Fire Insurance Co., Philadelphia, Pa.
Girard Fire & Marine Ins. Co., Philadelphia, Pa.
Girard Underwriters, Philadelphia, Pa.
Glens Falls Insurance Co., Glens Falls, N. Y.
Great American Ins. Co., New York, N. Y.
Hanover Fire Insurance Co., New York, N. Y.
Harmonia Fire Insurance Co., Buffalo, N. Y.
Hartford Fire Insurance Co., Hartford, Conn.
Home Fire & Marine Ins. Co., San Francisco, Calif.
Home Insurance Co., New York, N. Y.
Hudson Insurance Co., New York, N. Y.
Imperial Assurance Co., New York, N. Y.
Insurance Co. of North America, Philadelphia, Pa.
Insurance Co. of State of Pennsylvania, Philadelphia, Pa.
Jersey Fire Underwriters, Newark, N. J.
Liverpool & London & Globe Ins. Co., Liverpool, Eng.
Mechanics Insurance Co., Philadelphia, Pa.
Mechanics Underwriters, Philadelphia, Pa.
Mercantile Insurance Co., New York, N. Y.
National Ben Franklin Fire Ins. Co., Pittsburgh, Pa.
National Fire Insurance Co., Hartford, Conn.
National Liberty Ins. Co. of America, New York, N. Y.
National Security Fire Ins. Co., Omaha, Neb.
Newark Fire Insurance Co., Newark, N. J.
New Hampshire Fire Ins. Co., Manchester, N. H.
New York Underwriters Ins. Co., New York, N. Y.
Niagara Fire Ins. Co., New York, N. Y.
North British & Mercantile Ins. Co., London, Eng.
Norwich Union Fire Ins. Society, Norwich, Eng.
Occidental Underwriters, San Francisco, Calif.
Old Colony Ins. Co., Boston, Mass.
Palatine Insurance Co., London, Eng.
Patriotic Insurance Co. of America, New York, N. Y.
Pennsylvania Fire Ins. Co., Philadelphia, Pa.
Philadelphia Fire & Marine Ins. Co., Philadelphia, Pa.
Phoenix Assurance Co., London, Eng.
Phoenix Insurance Co., Hartford, Conn.
Providence Washington Ins. Co., Providence, R. I.
Queen Insurance Co., New York, N. Y.
Reliance Insurance Co., Philadelphia, Pa.
Rochester Dept. of Great American, New York, N. Y.
Royal Exchange Assurance Co., London, Eng.
Royal Insurance Co., Ltd., Liverpool, Eng.
Scotch Underwriters, Edinburg, Scotland.
Scottish Union & National Ins. Co., Edinburg, Scotland.
Security Insurance Co., New Haven, Conn.
Sentinel Fire Insurance Co., Springfield, Mass.
Springfield Fire & Marine Ins. Co., Springfield, Mass.
St. Paul Fire & Marine Ins. Co., St. Paul, Minn.
Star Insurance Co. of America, New York, N. Y.
Sun Insurance Office, London, England.
Svea Fire & Life Ins. Co., Gothenburg, Sweden.
Superior Fire Ins. Co., Pittsburgh, Pa.
Travelers Fire Insurance Co., Hartford, Conn.
Union Assurance Society, London, Eng.
Union Insurance Society of Canton, Hong Kong.
United Firemen's Insurance Co., Philadelphia, Pa.
Urbaine Fire Ins. Co., Paris, France.
Westchester Fire Ins. Co., New York, N. Y.
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AMONG THE PURPOSES FOR WHICH THE OIL INSURANCE ASSOCIATION WAS ORGANIZED

To enable oil operators to secure sufficient dependable insurance to adequately protect their interests.

To furnish property holders and those controlling oil business expert engineering and inspection service, so methods of insuring this class may be standardized, and efficient fire protective devices installed and properly maintained, thereby stabilizing the business to the point which will enable insurance companies generally to accept the class at fair cost and under equitable policy rates.

To make available the most business-like insurance arrangement for all oil companies.

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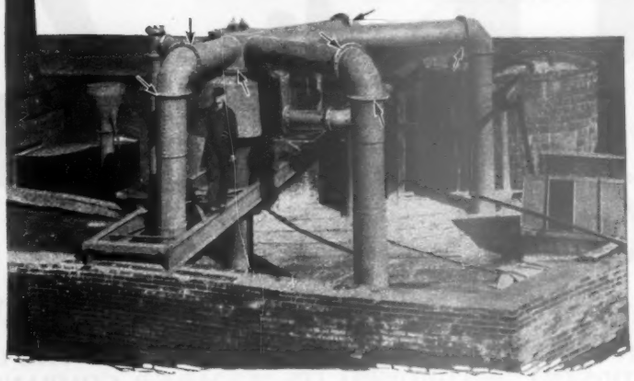

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As a result of this satisfactory performance, the Engineer uses Smooth-On No. 1 for similar pipe line work throughout this plant and says that he seldom has trouble from leakage.

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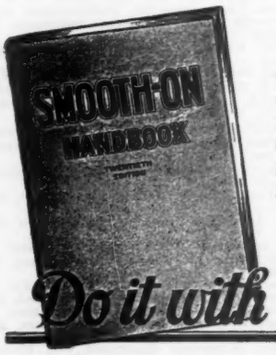

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GASOLINE PRODUCTION BY THE VARIOUS METHODS, JUNE, 1929 (Barrels)

	Straightrun	%	Cracked	%	Natural gasoline	%	Total
East Coast	2,590,000	55	2,060,000	43	85,000	2	4,735,000
Appalachian	886,000	64	455,000	33	46,000	3	1,387,000
Ind., Ill., Ky., etc.	2,964,000	54	2,364,000	43	190,000	3	5,518,000
Okla., Kans., Mo.	3,209,000	61	1,707,000	32	350,000	7	5,266,000
Texas	3,752,000	51	2,943,000	40	686,000	9	7,381,000
Louisiana and Arkansas	1,174,000	45	845,000	33	558,000	22	2,577,000
Rocky Mountain	655,000	47	621,000	44	130,000	9	1,406,000
California	4,945,000	67	888,000	12	*1,503,000	21	7,336,000
Total	20,175,000	57	11,883,000	33	3,548,000	10	35,606,000
Total May, 1929	20,879,000	58	11,723,000	32	3,668,000	10	36,270,000
Total Jan.-June, 1929	120,077,000	58	65,689,000	32	20,812,000	10	206,578,000
Gulf Coasts	3,147,000	43	3,164,000	44	963,000	13	7,274,000

*Includes 256,000 bbls. run through pipe lines.

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

(Continued from Page 50)

GRANT COUNTY

Bailey's No. 1 Stover, C SW SE Sec. 20-27-5w .....Rig on ground.
Baucher et al's No. 1 Deadman, SW SE Sec. 12-28-4w ..Drlg. 1,530 ft.
Cowden and others' No. 2 Vollmer, CEL NE SW Sec. 22-25-4w .....Shut down 5,640 ft.

GARVIN COUNTY

Gardner Pet. Co.'s No. 1 Halverson, SW cor. NE Sec. 8-4-2 .....Drlg. 3,950 ft.

GREER COUNTY

Helmerick & Payne's No. 1 Henck, NW cor. Sec. 23-6-24w..Shut down 485 ft.
I. T. I. O. and others' No. 1 fee, C SW NE Sec. 17-6-24w .....Underreaming casing 1,902 ft.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w ..Shut down 625 ft.

HARMON COUNTY

I. T. I. O. Co.'s No. 1 fee, C SW SE Sec. 17-5-24w .....Rig.

HARPER COUNTY

Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w .....Drlg. 1,040 ft.

HASKELL COUNTY

Holden's No. 1 Phillip, SE cor. Sec. 5-9-18e .....Drlg. 560 ft.
Marion Oil's No. 1 Sanders, NW NE SW Sec. 10-9-18e..Shut down 2,387 ft.
Sanboise Gas' No. 1 Unknown, SW NW SE Sec. 32-9-21e..Shut down 2,100 ft.

HUGHES COUNTY

Irwin et al's No. 1 Jones, SE NW Sec. 30-5-10 .....Rig on ground.
Canady et al's No. 1 Kanard, NW SW Sec. 20-9-12 .....Rig.
Whitney et al's No. 1 Moore, SE SW Sec. 17-5-9 .....Fishing 3,936 ft.
McGee Co.'s No. 1 fee, SE cor. Sec. 25-8-11e .....Shut down 3,814-36 ft.; hole full water; abandoned.
The Texas Company's No. 1 Bryan, SE NE SW Sec. 9-6-8e .....Plugging back to 2,660-66 ft.; 100 bbls., completed.

JACKSON COUNTY

Altus Oil Co.'s No. 1 Northington, NE cor. NE Sec. 4-1-20w .....Shut down 2,020 ft.

KINGFISHER COUNTY

Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w .....5,200 ft.; 8-in. csg.
McKenna & Crawford's No. 1 Sturgeon, NE cor. SW Sec. 27-16-6w .....Shut down 4,895 ft.

KIOWA COUNTY

Dean & Adkinson's No. 1 Kent, NW cor. Sec. 6-5-14w ..Location.
Hyde et al's No. 1 Jones, SE cor. Sec. 23-3-18w-50 .....Drlg. 490 ft.
S. H. Christian's No. 1 Stone, SE cor. Sec. 18-7-18w ....Rig on ground.
Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w..Shut down 1,035 ft.
McWharter and others' No. 1 Sherwood, CWL NW NE Sec. 2-5-17w .....Shut down 1,100 ft.

LEFLORE COUNTY

Red Bank Oil Co.'s No. 1 fee, SE SW NE Sec. 23-9-24 ..Drlg. 3,820 ft.

LATTIMER COUNTY

Limestone O. & G. Co.'s No. 1 Shaw, NW cor. NE NW Sec. 23-5-18e .....Rig.
Limestone Oil & Gas Co.'s No. 1 McMurray, SW cor. SW Sec. 15-5-18 .....Fishing 3,954 ft.

LINCOLN COUNTY

Morgan & Flynn's No. 1 Johnson, SW NE Sec. 1-16-5...Rig on ground.
Phillips Pet. Co.'s No. 1 Stephens, SE cor. NW Sec. 29-12-3 .....Rig.

LOGAN COUNTY

Haley & Smith's No. 1 Guier, SE cor. SW Sec. 33-18-3w..Shut down 3,970 ft.

McINTOSH COUNTY

Western Natl. Gas's No. 1 Wells, CEL SE NW Sec. 15-11-17 .....Drlg. 200 ft.
Holden's No. 2 Phillips, C SE SE Sec. 3-9-18e .....Drlg. 560 ft.
Spring Valley Oil Co.'s No. 1 Carr, SE cor. NE NW Sec. 16-10-13e .....Shut down 2,435 ft.
Patterson and others' No. 1 Smith, SW cor. NW SE Sec. 32-9-16 .....Shot 240 qts. 5,446-5,559 ft.; shot went off up hole; fishing.
Wolfe and others' No. 1 Unknown, NW cor. SE Sec. 15-12-18 .....Abandoned.

MAJOR COUNTY

Earl and others' No. 1 Turner, C NE NE Sec. 23-20-14w..Rig.
Wilson and others' No. 1 Unknown, NE cor. NE Sec. 4-23-16w .....Shut down 510 ft.

MUSKOGEE COUNTY

Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 ...Drlg. 300 ft.
Bradley's No. 1 Anderson, NW NW SW Sec. 26-15-19e ...Abandoned dry 1,195-1,212 ft.
Cooper-Badget's No. 1 Young, NW NE NE Sec. 7-12-20e..Shut down 50 ft.

NOBLE COUNTY

Blackwell O. & G. Co.'s No. 1 Foster, C NE NE NW Sec. 8-22-1w .....Shut down 150 ft.
Gypsy Oil Co.'s No. 1 Bailey, C NE NE Sec. 24-22-1e ..Drlg. 3,560 ft.
Magnolia Petroleum's No. 1 King, C SE SW Sec. 26-20-1w..Drlg. 3,455 ft.

OKFUSKEE COUNTY

Henry Oil Co.'s No. 1 Smith, NW cor. Sec. 35-12-9 .....Location.
Shepard et al's No. 1 Neveas, SE NW SW Sec. 3-12-10 ...Rig.
Superior and others' No. 1 Carolina, SE cor. Sec. 6-11-7e .....Drlg. 1,040 ft.

OKLAHOMA COUNTY

Ryan & Martin's No. 1 Lawton, NE NW Sec. 3-11-2w ..Rig on ground.
Tom Slick Oil Co.'s No. 1 Martin, C NW NW Sec. 13-13-1w .....Drlg. 2,313 ft.
Mid-Kansas' No. 1 Trosper, NE NW Sec. 19-12-1w .....Drlg. 6,227 ft.
Hall & Briscoe's No. 1 Holmes, NE cor. SW SE Sec. 10-11-3w .....Shut down 4,750 ft.

PITTSBURG COUNTY

Galbreath's No. 1 Snyder, C W half SW Sec. 28-4-13 ...Shut down 100 ft.
Empire O. & R. Co.'s No. 1 Unknown, C NE SE Sec. 33-7-16e .....Location.
Kerr & Koy's No. 1 Hall, C NW NW Sec. 32-4-12 .....Underreaming 8-in. csg. 2,406 ft.

PONTOTOC COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 McFarland, NW cor. Sec. 4-5-5 .....Location.
Indian Territory Illuminating Oil Co.'s No. 1 Shoate, C NE SE Sec. 1-4-4 .....Location.

POTTAWATOMIE COUNTY

Keister & Manning's No. 1 Tibbs, NE SW Sec. 9-8-4 ....Rig.
Amerada's No. 1 Vineyard, NW NE NE Sec. 15-7-3 .....Drlg. 3,120 ft.
Gypsy Oil Co.'s No. 1 Randosh, NW NE Sec. 23-6-4 .....Drlg. 3,240 ft.
Frank Moore's No. 1 Fundis, SE NE Sec. 19-7-3 .....Location.
Phillips Pet. Co.'s No. 1 King, NW cor. Sec. 26-8-4 .....Drlg. 3,500 ft.

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The new Zero Hour Duplex Electric Bomb is 99, 94/100% perfect. The chances of its failure to operate are too small to be computed in ordinary mathematics. These figures are what interest the operator who has a large investment and good opportunity for profit in an oil well that is completed and ready to shoot. He figures that the loss of time and production in cleaning out over a buried shot, let alone the danger, might cost him more than the price of any number of Zero Hour Duplex Bombs, one of which virtually eliminates that hazard. Hence the widespread conviction, among operators, that the new Zero Hour Duplex Electric Bomb, although it costs a few dollars extra, is something they "can't afford" to pass up.

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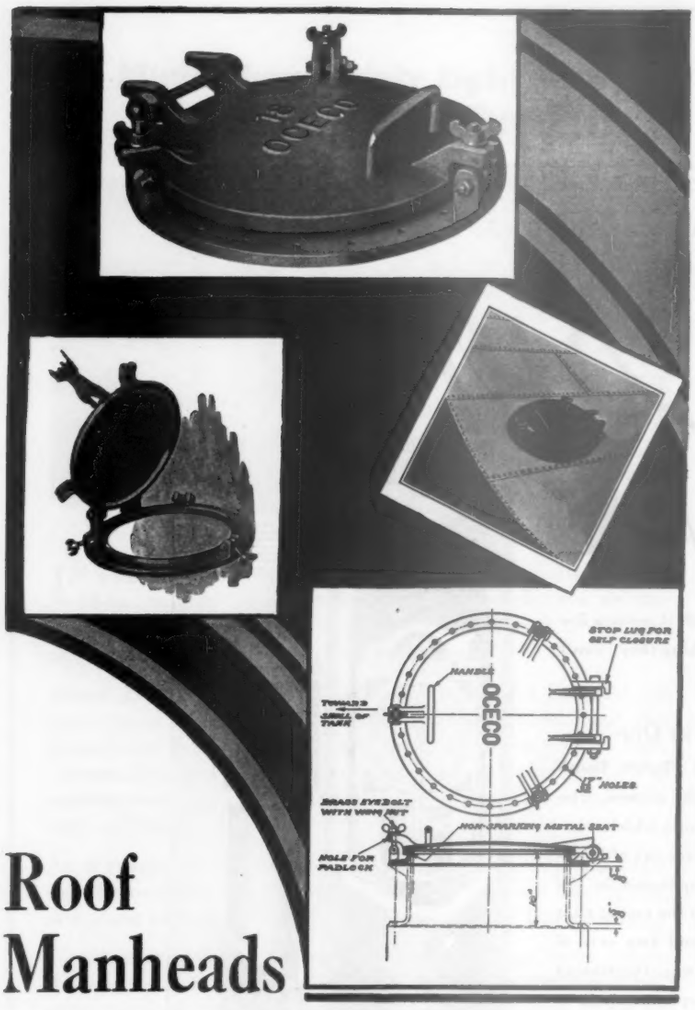

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Sinclair and Mid-Continent's No. 1 Cumings, SE NE SE Sec. 6-7-5 ....Drlg. 4,244 ft.
Shaffer and Margay's No. 1 Murphy, NW NE Sec. 11-6-3 ....Fishing 3,940 ft.
Cal-Cul Oil Co.'s No. 1 McKnight, NW cor. NE NW Sec. 9-8-3 ....Drlg. 3,295 ft.

ROGER MILLS COUNTY

Bucy & Stone's No. 1 William, C SW Sec. 23-12-24w ....Location.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ....Shut down 1,300 ft.

SEMINOLE COUNTY

McCullough Oil Co.'s No. 1 Luckett, NE NW Sec. 28-10-5..Drlg. 700 ft.
Prairie & Slick's No. 1 Harjo, NW SW Sec. 36-6-6 ....Rig.
Harris' No. 1 Harjocke, SE NE SE Sec. 8-6-6 ....Rig.
Prairie's No. 1 Mingo, NW NE Sec. 25-6-6 ....Drlg. 2,300 ft.

SEQUOYAH COUNTY

Hunt and others' No. 1 Unknown, SE cor. NW SW Sec. 12-12-23 ....Shut down 1,105 ft.
Buffington and others' No. 1 Melcher, C SW NW Sec. 31-12-24 ....Shut down 3,000 ft.

WOODS COUNTY

Peerless O. & G. et al's No. 1 Cromwell, SW SE Sec. 14-28-16w ....Drlg. 100 ft.
E. K. Miller's No. 1 Copenhavers, NW cor. NW Sec. 18-24-13w ....Rigged up and shut down.
Gypsy-Prairie and others' No. 1 Thompson, SE cor. SW Sec. 10-25-15w ....Drlg. 5,702 ft.
Sinclair Oil & Gas Co.'s No. 1 Steward, C SW SW Sec. 33-27-16w ....Drlg. 5,067 ft.

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 2-23-17w ....Shut down 1,387 ft.
Prairie Oil & Gas Co. and others' No. 1 James, NE cor. NW Sec. 23-23-17w ....Drlg. 4,721 ft.
Billy's Oil Co.'s No. 1 Watt, C SE Sec. 9-23-20w ....Drlg. 3,840 ft.
Burgoyne Brothers' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w ....Shut down 1,910 ft.

SOUTHERN OKLAHOMA

BRYAN COUNTY

Marshall et al's No. 1 fee, SE NW NW Sec. 26-5s-7 ....Shut down 225 ft.
Wheeler & Wiley's No. 1 Pitts, NW cor. Sec. 36-6s-9e ..Shut down 785 ft.
Yale Oil Syndicate's No. 1 Craige, C NW NE Sec. 36-9s-9e ....Shut down 1,640 ft.

CARTER COUNTY

L. J. Woodruff's No. 1 Zellnear, NE cor. NW SE Sec. 34-4s-1 ....Fishing 1,855 ft.
Avon-Dickey's No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 ....Shut down 420 ft.

CHOCTAW COUNTY

Dean & Adkinson's No. 1 Kent, NW cor. Sec. 6-55-14 ....Location.
Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6-9 ....Shut down 1,346 ft.

COTTON COUNTY

Fain & McGaha's No. 1 Mason, NW SW SW Sec. 29-4-11w ....Drlg. 2,605 ft.
Amerada Pet. Corp.'s No. 1 Dulaney, SE cor. NW NW Sec. 31-4-9w ....Drlg. 3,212 ft.

JEFFERSON COUNTY

Pierce & Brown's No. 1 Fisher, SE SW Sec. 13-6s-7w ..Shut down 1,790 ft.
J. A. Porter's No. 1 Paddock, NE NW NE Sec. 35-5s-7w..Drlg. 470 ft.

JOHNSTON COUNTY

Smith & Knisely's No. 1 Lane, E half Sec. 29-1-7 ....Shut down 2,090 ft.

MARSHALL COUNTY

Neif & Sneed's No. 1 Goff, SE NE SE Sec. 21-7s-5 ....Shut down 525 ft.

McCURTAIN COUNTY

Utopia Pet. Co.'s No. 1 Unknown, SE NW Sec. 14-9s-25 ..Location.
Milton et al's No. 1 Vase, SW NW Sec. 26-6s-21 ....Shut down 1,005 ft.

MURRAY COUNTY

Spears Drlg. Co.'s No. 1 Labor, NW cor. Sec. 17-1-2e ....500,000 ft. gas and show of oil 2,185-2,228 ft.; cleaning out 2,270 ft.

STEPHENS COUNTY

Pace and others' No. 1 Woolsey, SE SW NE Sec. 4-35-6w ....Drlg. 1,850 ft.
Wirt Franklin Pet.'s No. 1 Spain, SW SE NW Sec. 9-2-5w ....Sand 3,221-30 ft.; 715 bbls.

TILLMAN COUNTY

Cochran & Ridgway's No. 1 Barnes, C NW NE ....Cellar.
Landfair and others' No. 1 Smith, SE SW SE Sec. 6-2s-15w ....Shut down 2,535 ft.
Allen & Treadwell's No. 1 Howell, NW cor. SE Sec. 13-1-17w ....Shut down 820 ft.

OKLAHOMA PANHANDLE

Magnolia Pet. Co.'s No. 1 School, C SE NE Sec. 22-5-5 ..Abandoned 4,356 ft.
Skaer's No. 1 Hitch, NW cor. Sec. 25-1-16e ....Shut down 250 ft.

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE

Week Ending August 7

Carson County

Gulf Production Co.'s No. 3 E. Cooper, 330 feet south and 990 feet west of the NE cor. SW, Section 5, Block 9, I.&G.N. Survey. Champlin Refining Co.'s No. 4 McConnell, 990 feet south and 330 feet east of the NW cor. W half NW, Section 67, Block 4, I.&G.N. Survey. Delmar Oil Co.'s No. 5 J. L. Noel, 330 feet south and west of the NE cor. W half SE, Section 198, Block 3, I.&G.N. Survey. Empire Gas & Fuel Co.'s No. 2 C. E. and G. W. Deahl, 660 feet north and east of the SW cor., Section 3, Block 5, B.&B. Survey. Same company's No. 1 W. H. Fuqua, 330 feet north and west of the SE cor. NW, Section 17, Block 3, A.B. &M. Survey. Same company's No. 2 M. P. Co. (Lane), at the C NE, Section 62, Block 4, I.&G.N. Survey. Midwest Exploration Co.'s No. 4 E. Cooper, 330 feet north and east of the SW cor. W half NW, Section 5, Block 9, I.&G.N. Survey. Ryan Consolidated Oil Co.'s No. 5 Block, 330 feet north and west of the SE cor. NE, Section 111, Block 4, I.&G.N. Survey.

Gray County

Panhandle Refining Co.'s No. 3 G. H. Saunders, 330 feet north and east of the SW cor. E half NE, Section 3, Block 1, A.C.H.&B. Survey. Danciger Oil & Refining Co.'s No. 4 H. K. Beck, 330 feet south and west of the NE cor., Section 28, Block B-2, H.&G.N. Survey. Same company's No. 5 H. K. Beck, 330 feet south and east of the NW cor. SW, Section 28, Block B-2, H.&G.N. Survey. Guernsey Oil Co.'s No. 1 Dave Pope, 330 feet south and east of the NW cor. W half SW, Section 173, Block 3, I.&G.N. Survey. Humble Oil & Refining Co.'s No. 1 Palmer, 330 feet south and west of the northeast corner of the west 100 acres of Section 31, Block B-2, H.&G.N. Survey. Operators Oil Co.'s No. 1 H. B. Lovett, 330 feet south and east of the NW cor. W half NE, Section 57, Block B-2, H.&G.N. Survey.

Hutchinson County

Continental Oil Co.'s No. 1 Johnson Brothers-D, 330 feet south and west of the NE cor. NW, Section 6, Block 1, B.&B. Survey.

NORTH CENTRAL AND WEST TEXAS

Week Ending August 7

Archer County

Gwynn-Boyd Drilling Co. and others' No. 5 A. D. Thompson, 1,050 feet south and 150 feet east of the northwest corner of Lot 16, Section 20, A.T.N.C.L. Survey. L. G. Bradstreet Co.'s No. 1 C. E. Pruett, 450 feet north and 150 feet east of the southwest corner of the east 39 acres of the south 78 acres of Section 27, Thomas Toby Survey, A-645. Bridwell Oil Co.'s No. 2 Falls County School land,

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Will also consider selling from four thousand to six thousand acres leases in this same territory giving you 60,000 acres to draw from. This is the best and biggest productive gas territory in the Panhandle of Texas, and has the same assurance of a long period of production.

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150 feet north and 502 feet east of the SW cor. W half, Section 8, Falls County School land, A-130. Continental Oil Co.'s No. 3 W. J. Logan and others-A, 150 feet south and west of the northeast corner of their 180-acre lease "A" out of the A. Arms Survey, A-5.

Continental Oil Co. and F. P. Cullum's No. 1 W. T. Knight and others, 800 feet north and 150 feet west of the SE cor., Section 1, J. Poitevent Survey, A-348. Humble Oil & Refining Co.'s No. 7 Kunkel, 150 feet north and 1,650 feet west of the southeast corner of its 40-acre lease out of Section 3, B.B.B.&C. Survey, A-51. Same company's No. 1 Parkey-B, 1,150 feet north and 600 feet east of the SW cor., Section 44, Dallas County School Land, A-113. A. W. Johnson's No. 1 Garvey, 150 feet north and east of the SW cor. SE, Section 1,865, T.E.&L. Survey. Petroleum Production Co. and others' No. 10 A. M. Kunkel-B, 150 feet south and 1,950 feet west of the northeast corner of its 40-acre lease "B" out of Section 3, B.B.B.&C. Survey, A-51. The Texas Company's No. 1 J. S. Walsh, 784 feet north and 1,112 feet west of the SE cor., Section 2,416, T.E.&L. Survey. The Texas Company and Robert Oil Co.'s No. 1 T. L. Blewitt, 2,350 feet south and 1,350 feet east of the NW cor. E half, Section 2, S.P.R.R. Survey, A-1,253. Underwood Drilling Co. and others' No. 5 Andrews, 450 feet north and 1,700 feet east of the SW cor. N half, Section 1,805, T.E.&L. Survey. C. C. Williams' No. 1 Mrs. E. P. Bounds, 750 feet south and 150 feet east of the northwest corner of the Mrs. E. P. Bounds' tract out of the B.B.B.&C. Survey, A-54. W. C. Young's No. 3 Young, 150 feet north and 3,150 feet west of the southeast corner of the D.L.&C.Co. Survey, A-961.

Callahan County

Ewmo Oil Co.'s No. 1 C. Smith, 495 feet south and 2,475 feet east of the NW cor., Section 121, G.H.&H. Survey.

Coleman County

Jamison-Pollard & Forster's No. 1 John M. Hutchings, 150 feet south and 380 feet east of the northwest corner of the east 80 acres of the north 120 acres of the E half, Section 11, Block 1, G.H.&H. Survey.

Cooke County

Fain-McGaha Oil Corp.'s No. 3 Huggins, 150 feet north and 750 feet west of the southeast corner of the north 180 acres of the J. F. Huggins tract and located in the S.P.R.R. Survey No. 9, A-982. C. C. Lanier and others' No. 1 Hunt, 2,000 feet north and 150 feet east of the southwest corner of the W. A. Hunt 440-acre tract out of the George Dooley Survey, A-301.

Crane County

Simms Oil Co. and Atlantic Oil Producing Co.'s No. 2 University-F, 330 feet north and west of the SE cor. NE, Section 45, Block 30, University Land.

Fisher County

Cranfill-Reynolds and Sun Oil Co.'s No. 1 Texas Cement Plaster Co., 330 feet south and east of the most westerly NW cor., Section 10, English Survey.

Glasscock County

The California Co.'s No. 3 Currie, 990 feet south and 2,310 feet west of the NE cor., Section 219, Block 29, W.&N.W.R. R. Survey.

NORTH CENTRAL AND WEST TEXAS

Week Ended August 7

Haskell County

S. Barnes and others' No. 1 Albert Stone, 1,170 feet north and 1,980 feet east of the SW cor. of the R. W. Nabors Survey No. 15, A-336.

Howard County

Amerada & Rycade Corp.'s No. 12 Dora Roberts, 666 feet north and 1,022 feet west of the SE cor. of Section 128, Block 29, W.&N.W.R.R. Continental Oil Co.'s No. 1 Kloh & Rumsey, 2,310 feet south and 330 feet west of the NE cor. of Section 13, Block 33, Township 2s, T.&P. Same company's No. 2 Kloh & Rumsey, 1,650 feet south and 330 feet west of the NE cor. of Section 13, Block 33, Township 2s, T.&P. Same company's No. 3 Kloh & Rumsey, 990 feet south and 330 feet west of the NE cor. of Section 13, Block 33, Township 2s, T.&P. Group No. 1 Oil Co. & Continental Oil Co.'s No. 7 Settles-A, 1,650 feet north and 2,310 feet west of the SE cor. of Section 135, Block 29, W.&N.W.R.R. Same company's No. 8 Settles-A, 990 feet north and 2,310 feet west of the SE cor. of Section 135, Block 29, W.&N.W.R.R. Merrick & Lamb's No. 9 Clay, 660 feet north and 360 feet west of the SE cor. of Section 126, Block 29, W.&N.W.R.R. Plymouth Oil Co.'s No. 5 Kloh & Rumsey, 1,650 feet south and 330 feet east of the NW cor. of Section 5, Block 32, Township 2s, T.&P. The California Co.'s No. 3 Dora Roberts, Lease 1, 1,654 feet north and 990 feet west of the SE cor. of Section 137, Block 29, W.&N.W.R.R.

Jack County

Bryson Oil & Gas Co.'s No. 1 O. Loving-B, 300 feet north and west of the SE cor. of the O. Loving 347-acre tract out of the T.&N.O. Survey No. 3, A-852.

Montague County

The Texas Company's No. 4 A. B. Hinton, 1,977 feet south and 1,292 feet west of the NE cor. of the A. Coats Survey A-129.

Shackelford County

P. K. French and others' No. 1 E. S. Dawson and others, 660 feet north and east of the SW cor. of the SE of Section 184, Block 10, E.T.R.R. G. Johnson, Inc., No. 1 R. J. Moberly, 150 feet south and east of the NW cor. of the SW of the NE of Section 58, Block 11, T.&P. S. B. Owens and others' No. 1 W. Y. and R. A. Davis-B, 150 feet south and west of the NE cor. of the SE of the NW of Section 15, Block 14, T.&P. Reading-Sedwick & Webb's No. 1 Dawson and others, 660 feet north and east of the SW cor. of the SE of the NE of Section 185, Block 10, E.T.R.R. Roeser & Pendleton's No. 10 Cook-A, Section 88, 210 feet south and 1,084 feet east of the NW cor. of the SW of Section 88, Block 10, E.T.R.R. Same company's No. 11 Cook-A, Section 88, 656 feet south and 1,084 feet east of the NW cor. of the SW of Section 88, Block 10, E.T.R.R. Same company's No. 12 Cook-A, Section 88, 1,108 feet south and 1,516 feet east of the NW cor. of the SW of Section 88, Block 10, E.T.R.R. Same company's No. 13 Cook-A, Section 88, 613 feet south and 1,950 feet east of the NW cor. of the SW of Section 88, Block 10, E.T.R.R. J. K. Simmons' No. 1 Harvey, Section 8, 155 feet north and west of the SE cor. of the SW of Section 8, Block 14, T.&P. Texas Consolidated Oil Co.'s No. 2 Reynolds-B, 150 feet north and 450 feet east of the SW cor. of the N half of the NW of Section 23, Block 11, T.&P.

Stephens County

Tripplehorn Brothers' No. 1 Hawley, 300 feet south and 800 feet west of the NE cor. of the J. Thompson Survey A-216.

Palo Pinto County

Panhandle Refining Co.'s No. 1 Costello, 150 feet northwest of the SE line and 150 feet northeast of the SW line of the M. B. Costello 122.5-acre tract out of the J. T. Smith Survey.

Parker County

J. P. McEvoy and others' No. 1 Johnson, 450 feet north and west of the SE cor. of the west 240 acres of Section 275, T.&P.

Pecos County

W. M. Bowen's No. 1 University, at the center of the NE of Section 25, Block 16, University Land. S. B. Owens' No. 1 J. Masterson, 330 feet northeast of the SW line and 330 feet northwest of the SE line of Section 104, Block 10, H.&G.N. Shell Petroleum Corp.'s No. 1 University-C, 1,661 feet south and 1,050 feet east of the NW cor. of Section 31, Block 16, University Land. Skelly Oil Co.'s No. 2 J. H. Tippett, 2,191 feet north and 1,330 feet west of the SW cor. of the Runnels County School Land, A-2,169, and located in Section 108, Block 194, G.C.&S.F. Phillips Petroleum Co.'s No. 1 Southwestern Life Insurance Co., 330 feet north and 2,310 feet east of the SW cor. of Section 73, Block OW, T.M.R.R. The California Co.'s No. 8 M. A. Smith, Lease 1, Section 23, 330 feet north and 3,097 feet east of the SW cor. of Section 23, Block 194, G.C.&S.F.

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Back of this advertisement and the Pure Oil salesmen, back of the products which they sell, is a vast army of men—ready to serve you. Hundreds are working in Pure Oil's producing fields, others are operating its modern refineries. Some direct the movements of Pure Oil tank cars while some flash orders over private telegraph lines. *Every* operation from wells to you is ably controlled by The Pure Oil Company—your assurance of uniform quality . . . delivery on the dot!

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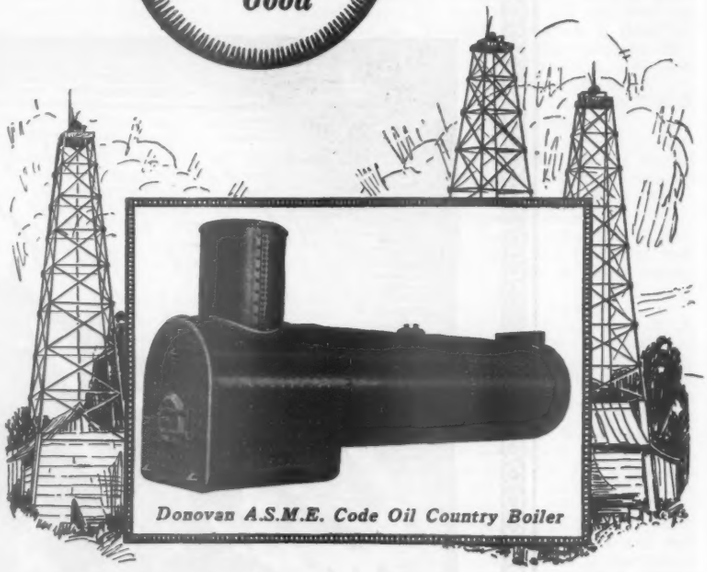

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Here is another instance of the unusual ability of DONOVAN BOILERS.

When the Hope Natural Gas Co. drilled their deep test at Sand Hill, Ritchie County, W. Va., a 25 H.P. DONOVAN was chosen for the job. The fuel used was gas—under one pound or less pressure. In addition to the drilling job, the boiler furnished steam for a generator. This was an unusually tough job for the boiler because all the other equipment was extra large and extra heavy.

From a depth of 4300′ the tools were pulled rapidly from the hole, the bailer run twice, the tools again lowered into the hole and drilling resumed in exactly 50 minutes. This severe test failed to pull any water out of the boiler and it failed to lower the steam pressure materially. It was never necessary to wait for steam. There was always plenty and just when needed.

At the time, that DONOVAN had been in constant use for five years and had just finished another well to 4600′. The only repairs in the whole five years consisted in renewing the gas flue.

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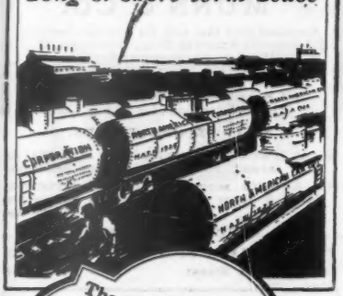

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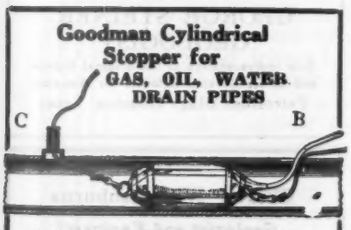

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DIVIDEND NOTICE
Imperial Royalties Company
Established April, 1920
Will pay the usual monthly dividend of 1½% on its $1.00 par Preferred shares on August 30. This is dividend No. 107 and makes a total of 181% paid to Preferred shareholders. Also the usual monthly dividend of 18 cents a share will be paid on its Class A Preferred Shares on August 30.
E. S. Horn, H. O. Bland, J. E. Horn, Trustees.
Hunt Bldg., Tulsa, Okla.

The California Co.'s No. 5 Smith, Lease 1, Section 21, 330 feet south and 2,405 feet east of the NW cor. of Section 21, Block 194, G.C.&S.F.

Wichita County

J. H. Cottom's No. 1 Ferguson, 150 feet south and 450 feet west of the NE cor. of Lot 15, D.L.&C. Co. Survey A-712. Everts & Jamison's No. 1 S. P. Gibson, 150 feet north and 450 feet east of the SW cor. of Section 302, Waggoner Colony Subdivision. Golding-Cochran & Mayfield's No. 9 Waggoner Brothers, 450 feet north and west of the SE cor. of Lot 22, H. George Survey A-454. H. Hobbs' No. 3 S. I. & H. M. Munger, 150 feet south and 650 feet west of the NE cor. of Block 30, Kemp Wichita Valley Land. Humble Oil & Refining Co. & Hines and others' No. 4 Waggoner Brothers, 1,872 feet south and 3,929 feet east of the NW cor. of the M. A. Willis Survey A-547. E. H. Pigg's No. 1 Foster & Allen, 3,212 feet north and 810 feet west of the SE cor. of Section 2, H.T.&B., A-633. F. P. Rose's No. 1 S. I. & H. M. Munger, 150 feet north and east of the SW cor. of Lot 10, Block 24, Kemp Wichita Valley Land.

Wilbarger County

L. G. Bradstreet Co.'s No. 2 Waggoner-C, 150 feet north and 750 feet west of the southeast corner of the north 100 acres of the east 360 acres of Section 31, Block 4, H.&T.C. Survey. Cosden Oil Co.'s No. 2 Waggoner-D, 1,461 feet south and 150 feet west of the NE cor., Section 35, Block 2, H.&T.C. Survey. Dixie Oil Co.'s No. 1 Waggoner-B, 205 feet south and west of the northeast corner of the south 80 acres of the NW, Section 4, Block 5, H.&T.C. Survey. Same company's No. 1 Waggoner-C, 205 feet south and west of the NE cor. W half SE, Section 4, Block 5, H.&T.C. Survey. Empire Gas & Fuel Co.'s No. 9 Waggoner-A, 315 feet north and 205 feet west of the SE cor. NE NW, Section 32, Block 4, H.&T.C. Survey. Same company's No. 13 Waggoner-C, 1,105 feet south and 205 feet west of the NE cor. NW, Section 25, Block 4, H.&T.C. Survey. Same company's No. 14 Waggoner-C, 1,330 feet south and 762 feet east of the NW cor., Section 25, Block 4, H.&T.C. Survey. Same company's No. 15 Waggoner-C, 1,205 feet north and 255 feet east of the SW cor. NW, Section 25, Block 4, H.&T.C. Survey. Fain-McGaha Oil Corp.'s No. 17 Waggoner-W, 205 feet south and 280 feet east of the northwest corner of their 100-acre lease "W" out of Section 32, Block 4, H.&T.C. Survey. Same corporation's No. 6 Waggoner-Y, 205 feet south and 1,005 feet west of the NE cor. NW SE, Section 43, M.E. P.&P. Survey. W. T. Knight's No. 6 Waggoner-A, 150 feet south and 1,050 feet west of the northeast corner of his 20-acre lease "A" out of Section 40, M.E. P.&P. Survey. Simpson-Fell Oil Co.'s No. 2 Waggoner-A, 450 feet south and 490 feet east of the NW cor. SW NW, Section 26, Block 2, H.&T.C. Survey. Staley-Wynne & Co.'s No. 3 Waggoner-E, 205 feet south of the middle of the north line of the SW NE, Section 25, Block 4, H. &T.C. Survey. Same company's No. 1 Waggoner-AA, 2,900 feet north and 150 feet east of the SW cor., Section 33, Block 4, H.&T.C. Survey, being 260 feet north and 150 feet east of the southwest corner of its 65-acre lease.

Young County

Carpenter's No. 4 Barrett, 150 feet south and 1,050 feet east of the northwest corner of the M. Barrett 225-acre tract out of the Edward W. Sergeant Survey, A-253. Cooper & Hill's No. 1 Hankins, 150 feet north and west of the SE cor., Section 410, T.E.&L. Survey. W. R. Stafford's No. 2 Bentley, 150 feet north and east of the southwest corner of the north 20 acres of the west 40 acres of the N half, Section 283, T.E.&L. Survey. United Royalty Co. and others' No. 2 Carpenter, 150 feet north and 450 feet east of the southwest corner of the east half of the Carpenter 100-acre tract out of the Edward Sergeant Survey, A-253. E. W. Walton and others' No. 1 J. W. Jones, 150 feet south and east of the northwest corner of the J. W. Jones tract out of the S. Sallie Survey, A-252. C. C. Williams' No. 1 T. F. Harman,

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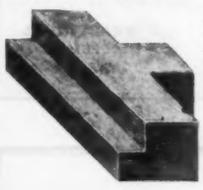

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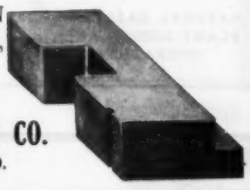

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COLUMBUS, OHIO

150 feet north and east of the southwest corner of the T. F. Harman 93-acre tract out of the S. Sallie Survey, A-252.

Corrections

In Archer County: L. T. Burns' No. 2 L. F. Wilson-McCrory Trustee-M, 150 feet north and 380 feet east of the southwest corner of the southeast of Lot 4, Section 114, A.T.N.C.L. Survey.

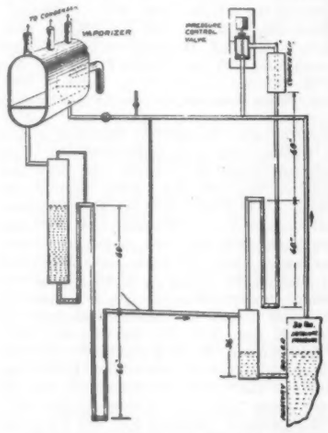
In Pecos County: Taylor-Link Oil Co.'s No. 2 University, 330 feet south and 1,047 feet east of the NW cor., Section 31, Block 16, University Land. World Oil Co.'s No. 1 University, 330 feet south and 1,650 feet west of the NE cor., Section 31, Block 16, University Land. Shell Petroleum Corp.'s No. 1 University-B, 1,661 feet north and 1,050 feet east of the SW cor., Section 30, Block 16, University Land.

Recent Patents

DISTILL WITH MERCURY

1,714,811. Process of Distilling Mineral Oil. Arthur E. Pew, Jr., Bryn Mawr, and Henry Thomas, Ridley Park, Pa., assignors to Sun Oil Co., Philadelphia, Pa., a corporation of New Jersey. Filed May 29, 1926. Serial No. 112,433. 9 claims. (Cl. 196—119.)

3. The process of distilling mineral oil which comprises flowing a stream of oil continuously into, through and out of a confined space, generating mercury vapor from a body of liquid mercury, flowing mercury vapor toward and into a confined path in heat exchange relation with the oil in said space and partly vaporizing the oil and condensing the mercury vapor, maintaining in said confined path a vapor pressure substantially less than the autogenous pressure on the body of liquid mercury, returning the mercury condensate to said body of liquid



mercury and in the return of liquid condensate flowing the condensate through a vapor space communicating with the vapor space in said confined path and through a column of said condensate whose hydrostatic pressure is sufficient to balance the difference in vapor pressures on the body of liquid mercury and in said confined path.

1,681,899. Art of Cracking Hydrocarbons. Frank A. Howard, Elizabeth, N. J., assignor to Standard Oil Development Co., a corporation of Delaware. Filed March 20, 1923. Serial No. 626,624. 7 Claims. (Cl. 196—60.)

6. In apparatus of the character described, the combination of a heating coil located as a screen to absorb radiant heat, a distillation chamber into which said coil discharges, another heating coil screened solely by the first-mentioned coil, and a vapor line from the chamber to the last-mentioned heating coil.

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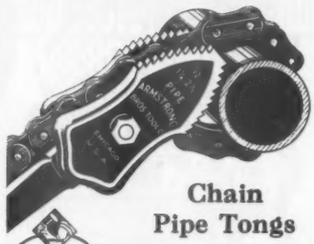

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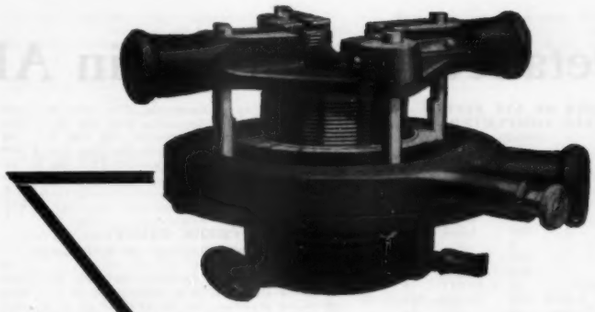

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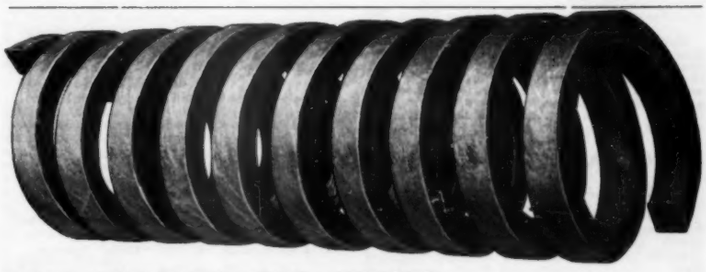

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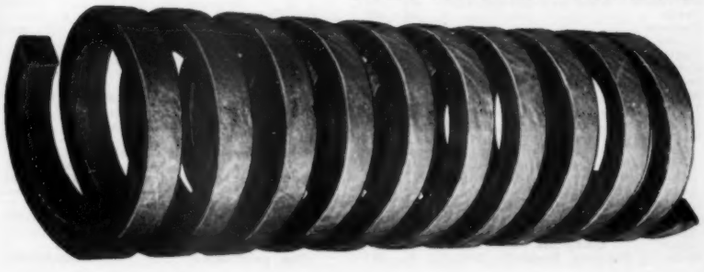

Detailed Operations in All Fields for Month of July

SUMMARY OF ALL FIELDS
WELLS COMPLETED

Field—	Comp.	Prod.	Dry	Gas
Eastern	564	1,898	38	75
Central Ohio	122	727	30	52
Lima	18	1,260	1	3
Indiana	14	66	9	1
Michigan	49	18,820	8	1
Illinois	40	2,715	7	1
Kentucky	162	5,503	53	10
Mississippi	2	....	2	..
Oklahoma	337	121,836	119	44
Kansas	113	24,222	43	3
Texas Panhandle	42	22,880	4	7
North Central Texas	336	25,684	155	9
East Central Texas	15	300	14	..
West Texas	61	44,720	25	..
Southwest Texas	122	11,456	61	11
East Texas	7	....	2	5
Gulf Coast	120	39,975	45	3
North Louisiana	56	2,073	15	26
Arkansas	8	1,290	5	1
Wyoming	12	5,711	3	1
Montana	30	453	7	8
Colorado	15	25	14	..
New Mexico	11	1,401	3	3
Utah	1	....	1	..
Total July	2,257	333,015	664	264
Total June	2,062	327,578	587	221
Difference	195	5,437	77	43

Rigs and Wells Drilling

Field—	Rigs	Drlg.	Ttl.
Eastern	139	469	608
Central Ohio	99	186	285
Lima	4	26	30
Indiana	1	52	53
Michigan	46	142	188
Illinois	1	55	56
Kentucky	17	197	214
Mississippi	5	18	23
Oklahoma	186	753	939
Kansas	55	294	349
Texas Panhandle	48	203	251
North Central Texas	106	503	609
East Central Texas	1	32	33
West Texas	69	245	314
Southwest Texas	31	200	231
East Texas	2	17	19
Gulf Coast	19	222	241
North Louisiana	56	122	178
Arkansas	11	44	55
Wyoming	28	161	189
Montana	20	114	134
Colorado	11	82	93
New Mexico	31	83	114
Utah	2	29	31
Total July	988	4,249	5,237
Total June	1,057	3,944	5,001
Difference	69	305	236

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	2	546	1	..
Creek	24	701	11	1
Hughes	9	...	5	4
Kay	4	...	2	2
Muskogee	20	470	14	2
Okfuskee	11	472	4	2
Okmulgee	17	167	7	4
Osage	21	857	1	3
Pawnee	8	380	..	1
Pontotoc	5	740	2	1
Pottawatomie	49	28,548	20	..
Seminole	81	71,341	20	12
Stephens	23	1,809	8	3
Wagoner	8	45	4	1
Miscellaneous	51	15,760	20	8
Total July	337	121,836	119	44
Total June	241	61,422	80	16
Difference	96	60,414	39	28

Summary of Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Beckham	1	8	9
Carter	..	15	15
Cotton	..	9	9
Creek	22	56	78
Grady	1	4	5
Grant	..	13	13
Hughes	3	15	18
Kay	1	8	9
Kiowa	1	9	10
Logan	1	18	19
Muskogee	7	19	26
Oklahoma	14	39	53
Okfuskee	8	32	40
Okmulgee	5	32	37
Osage	9	34	43
Pawnee	6	13	19
Payne & Lincoln	3	18	21
Pontotoc	5	17	22
Pottawatomie	27	105	132
Seminole	58	176	234
Stephens	4	26	30
Tulsa	..	4	4
Wagoner	1	10	11
Miscellaneous	9	73	82
Total July	186	753	939
Total June	147	711	858
Difference	39	42	81

WELLS COMPLETED
CARTER COUNTY

30-1s-3w Putman, Magnolia Pet Co. 2.. 187
13-1s-4w Green, Magnolia Pet. Co. 9.. 148
4-2s-3w Suitor, Magnolia Pet Co. 1... dry
33-1s-3w Hefner, Magnolia Pet Co. 6.. 50
12-1s-4w E. Hanson, Magnolia Pet Co. 2 130
33-1s-3w E. Hefner, Magnolia Pet. Co. 7 31

Wells completed 6
Production 546
Dry 1

CREEK COUNTY

6-19-7 Anthis, Silurian Oil & Houston Oil 2 90
35-19-8 Lapham, Murphy Oil Co. 1 .. dry
20-18-10 Barnett, Wm. Sherry et al 1 .. dry
32-18-10 Ralston, W. S. O'Hair et al 1.. dry
11-17-10 Smith, O. M. Irelan et al 1-A 12
13-17-10 Smiles, Ted Ray et al 3 ..... gas
28-17-12 Chamberlain, Roxaline Oil Co. 1 ..... gas
16-16-10 Cress, Tom Slick Oil Co. et al 1 ..... dry
23-14-10 Scott, Atlantic Oil Prod. Co. 2 dry
12-19-9 Petraseck, J. E. Abbott et al 1 dry
32-18-7 Dix, Magnolia Pet. Co. 7 ... 10
16-17-7 Gooden, The Texas Company 3 15
17-17-7 Tiger, Blackwell O. & G. Co. 11 60
21-17-7 Litchfield, The Prairie O. & G. Co. 5 462
10-16-10 Peeper, Hamon et al 1-A ..... dry
31-15-9 Lucas, C. G. Tibbens 6..... 5
20-19-9 Koch, Phillips Pet. Co. 1 25
30-19-9 Oglesby, Glen Evans et al 1 dry
9-18-7 Scott, Magnolia Pet. Co. 1 2
17-18-7 W. Starr, Silurian Oil Co. 3-A 20
10-17-10 Hay, Central Commercial Oil Co. 2 ..... gas
15-16-9 Carter, Love & Meyers et al 1 dry
16-16-10 Garrett, Franchott Oil & Mid-Continent Pet. 4..... dry
1-14-10 McNack, C. O. Buckles et al 1 dry

Wells completed 24
Production 701
Dry 11
Gas 1
Gas production 6,500,000

HUGHES COUNTY

11-9-10 Sullivan, Saul Steckelberg 1.. dry
6-8-9 Scott, Independent O. & G. & Kingwood Oil 1 ..... gas
7-8-9 Marshall, Independent O. & G. Co. 1 ..... gas
7-8-9 Marshall, Independent O. & G. Co. 1 ..... gas
6-8-9 Godfrey, I.T.I.O. 1 ..... gas
15-9-10 Scott, Yarnell Drlg. Co. 1 .. dry
18-9-10 Grayson, Harris & Haynes 1... dry
19-5-8 Wade, Westheimer & Daube 10 dry
4-8-9 Wade, The Prairie O. & G. Co. & T. B. Slick 1..... dry

Wells completed 9
Dry 5
Gas 4
Gas production 65,000,000

KAY COUNTY

36-28-1w School Land, Harris & Haun 2 ..... dry
23-27-1 Courter, Wilson et al 1 ..... gas
12-28-1w Fulton, Royal O. & G. Co. 1 dry
35-28-1w Clift, Industrial O. & G. Co. 1 gas

Wells completed 4
Dry 2
Gas 2
Gas production 500,000

MUSKOGEE COUNTY

7-15-15 Friday, C. W. Betz, trustee, 1-A ..... dry
20-15-16 Woodall, E. Price's 4..... dry
10-15-17 Grimmett, Cherokee Public Service Co. 2 ..... dry
24-15-17 Harrod, R. E. Kimsey 1 ..... dry
1-14-18 Francis, W. J. Metzger 9 .... dry
34-14-19 McCulloch, M. S. Mussellem 1 dry
8-13-16 Jackson, Mazda Oil Co. 1-A.. 75
13-13-18 Smith, H. D. Johnson et al 1 gas
8-15-15 N. Barnett, Babcock Bros 5... 150
32-15-19 Flying, S. L. Schofield 1 .... dry
14-14-16 Cherry, Pure Oil Co. 5 ..... dry
3-15-15 Simmons, Bryan Pet. Co. 3 .. dry
8-15-15 N. Barnett, Bryan Pet. Co. 5 20
9-15-15 Jackson, Beu & Hill 1-A..... dry
29-15-16 Howard, Traders Pet. Co. 1-A dry
30-15-16 Howard, R. B. Rose 10..... 225
20-15-20 Nash, J. L. Slusher 1 ..... dry
13-14-18 Smith, J. L. Powell 1 ..... dry
18-14-18 Washington, Decius & Garrett 1-A ..... dry
13-13-18 Smith, H. D. Johnson et al 2 gas

Wells completed 20
Production 470
Dry 14
Gas 2
Gas production 2,750,000

OKFUSKEE COUNTY

29-12-10 Fixico, Minnehoma Oil Co. 1 .. 200
35-11-9 Severs, E. L. Robinson et al 4 12
2-10-11 Simmer, Kingwood Oil Co. & Umburn 2 ..... dry
29-12-10 Miracle, The Prairie O. & G. Co. 2 ..... gas
31-11-11 McCoy, Mid-Continent Pet. Corp. 1 ..... gas
12-10-11 Robinson, Kingwood Oil Co. & Misner 2 25
29-12-7 Soweka, Barnsdall Oil Co. 1.. dry
25-11-10 Tiger, Magnolia Pet. Co. 1... dry
31-11-11 Grayson, Minnehoma O. & G. Co. 1 185
1-10-11 Robinson, W. L. Umburn et al 2 ..... dry
12-10-11 Robinson, Umburn & Fleming 1 50

Wells completed 11
Production 472
Dry 4
Gas 2
Gas production 42,000,000

OKMULGEE COUNTY

17-13-11 Smith, American Maricaibo Oil Co. 1 ..... dry
4-11-12 Hawkins, Wier & Cramer 3... 20
32-15-13 Clarkson, J. N. Buzzard 1.... gas
25-15-14 Jefferson, Denton & Marshall 1 gas
10-14-12 Cornelius, Shaffer O. & R. Co. et al 1-A ..... dry
14-14-14 Colbert, J. E. Wallace 7 40
16-14-14 Colbert, Kessler Pet. Co. 4.... dry
2-13-14 Tucker, Tiger Mtn. Oil Co. 4 dry
17-13-14 Doyle, A. H. Howard 1-A .... dry
20-15-13 M. Prince, Kirkland & Sons 2 dry
28-13-14 Doyle, Troutt Drlg. Co. 8.... 25
14-14-14 V. Colbert, Mechlin & Berlin 8 32
12-11-13 Fisher, B. Morgan 1 ..... gas
18-15-13 Minugh, W. B. Pine 1 ..... gas
19-15-13 London, Kirkland & Son 2.... 20
14-14-14 Colbert, J. E. Wallace 8..... 35
24-14-14 Stewart, McClain & Miller 1-A dry

Wells completed 17
Production 167
Dry 7
Gas 4
Gas production 6,250,000

OSAGE COUNTY

16-28-8 I. T. I. Oil Co. 1..... 10
15-26-6 Lewis Prod. Co. et al 4..... 327
28-23-9 I. T. I. Oil Co. 3..... 2
8-22-11 J. H. Craig 5 10
22-22-11 Branstetter & Barnsdall Oil Co. 3 15
26-20-9 Copeland, Devonian Oil Co. 2 30
4-20-10 Okla. Power & Water Co. 119 gas
34-26-6 Carter Oil Co. 1 40
22-27-11 Peters Pet. Corp. & P. & R. Corp. 1 250
5-23-9 Continental Oil & Ref. Co. 4 gas
6-23-9 A. G. Oliphant 3 3
12-21-8 Braden & Moore 16 10
10-21-10 Oklahoma Natural Gas 1,713 gas
12-21-11 Zika & Neely 1 15
17-27-6 Peters Petroleum Co. et al 11.. 10
27-27-11 Peters Pet. Co. & Prod. & Ref. Corp. 2 55
13-27-6 Wrightsman Pet. Co. 1..... dry
11-26-8 Peters Pet. Co. & Prod. & Ref. Corp. 2 7
17-23-12 Silurian Oil Co. 55 50
16-21-9 Clint Moore Estate et al 2 8
34-20-10 Mid-Continent Corp. 1..... 15

Wells completed 21
Production 857
Dry 1
Gas 3
Gas Production 7,500,000

PAWNEE COUNTY

20-21-9 Edmundson, Edwards et al 1.. 20
25-21-7 Scully, Gled Oil Co. 1 75
25-21-8 Thomas, Peter Adamson, Jr. 5 30
32-21-9 Comer, Jacob Fell 3 5
9-20-7 Clark, Ora Stein 1 ..... gas
19-20-7 Collins, Houston Oil 1 15
35-20-9 Smeltzer, Swift et al 4 225
31-21-9 Edminston, John Byrne 4 10

Wells completed 8
Production 380
Gas 1
Gas production 7,000,000

PONTOTOC COUNTY

32-5-5 Maulden, Superior Oil Corp. 4 100
10-4-7 Smith, Westheimer & Daube 1 dry
28-5-5 Hatcher, La Salle Oil Co. 1.... dry
1-4-7 Ritchie, Hamaokla Oil Co. 3 .. gas
19-5-5 Norris, Empire O. & R. Co. 1 .. 640

Wells completed 5
Poduction 740
Dry 2
Gas 1
Gas production 2,000,000

POTTAWATOMIE COUNTY

5-9-5 Rogers, Mid-Continent Pet. Corp 4 130
12-8-4 Dunn, Tidal Oil Co. 1..... dry
Dunn, Tidal Oil Co. 2..... dry
7-8-5 Colvin, Twin State Oil Co. 3... dry
16-7-4 Richardson, Amerada Pet Corp. 1 50
17-7-4 Wyatt, Houston Oil Co. 1 1,414
19-6-4 Walker, T. B. Slick & Amerada Pet. Corp. 1 4,090
18-8-5 Linger, W. B. Pine 1 25
18-7-5 Ramsey, The Prairie O. & G. Co. & T. B. Slick 1 ..... dry
5-9-5 Rogers, Mid-Continent Pet. Corp. 3 1,675
13-8-4 Pratt, Superior Oil Corp. 1 ..... dry
20-8-5 Green, Magnolia Pet. Co. 1 60
16-7-4 Rhodd, Independent O. & G. Co. 1 3,780
18-6-4 Townsite, Reynolds Royalty Co. 1 ..... dry
20-6-4 Bledsoe, Tom Slick Oil Co. 1..1,150
Welden, Tom Slick Oil Co. 1 .. 540
17-7-4 Rice, The Prairie O. & G. Co. 1 1,530
7-8-5 Colvin, The Texas Company 3.. 16
8-8-5 Smith, Wilcox O. & G. Co. 4..1,417
18-8-5 Everets, Mariand & Shell Pet. 2 255
13-7-4 Caudle, Magnolia Pet. Co. 1... 368
17-7-4 Hubanks, Magnolia Pet. Co. & Pierce Pet. 1 3,267
18-6-4 Townsite, Harry Morris 1 .... dry
Townsite, Hall & Briscoe 1 .... dry
19-6-4 Laster, Simms Oil Co. 2 320
20-6-4 Welden, Tom Slick Oil Co. 2.. 130
30-7-5 Smith, The Prairie O. & G. Co. 3 20
19-6-4 Laster, The Prairie O. & G. Co. & T. B. Slick 3 1,230
8-8-5 Smith, Wilcox O. & G. Co. 5... 180
2-7-4 Kelly, Martin & Irwin 2 3,255
26-7-4 Rosemund, Gypsy Oil Co. 4 102
31-7-5 Blandin, Gypsy Oil Co. 2 ..... dry
28-6-4 McDowell, McCulloch Oil Co. 1 .. dry
19-6-4 Beebe, The Prairie O. & G. Co. 1 dry
20-6-4 Lynn, The Prairie O. & G. Co. 1 dry
Lynn, The Prairie O. & G. C. 2 dry
1-7-4 Borrows, Independent O. & G. Co. 2 800
17-7-4 Latimer, Magnolia Pet. Co. 2.... 600
Green, Gypsy Oil Co. 1 475
17-6-4 Hatley, Simms Oil Co. 1 ..... dry
18-6-4 Alexander, Simms Oil Co. & Tom Slick Oil Co. 1 ..... dry
19-6-4 Gardner, Independent O. & G. Co. & Twin State Oil 1 .. 254
20-6-4 Lynn, Independent O. & G. Co. 1 dry
19-6-4 Beebe, The Prairie O. & G. Co. 2 dry
20-6-4 Causey, Mid-Continent Pet. Corp. 1 ..... dry
Bledsoe, Tom Slick Oil Co. 3... dry
Bledsoe, Tom Slick Oil Co. 4... dry
Welden, Tom Slick Oil Co. 3.... 45
7-6-8 Davis "A," Sinclair O. & G. Co. 4 1,360

Wells completed 49
Production 28,548
Dry 20

SEMINOLE COUNTY

24-9-5 Miller, Sinclair O. & G. Co. 1 587
18-9-6 D. W. Anderson, Magnolia Pet. Co. 1 2,376
18-9-7 Coody, McCulloch Oil Co. 1 .... dry
11-8-5 Bean, Sinclair O. & G. Co. 2.... 80
Bean, Sinclair O. & G. Co. 3 60
4-8-6 Barnes, Carter Oil Co. 1 ..... dry
13-7-6 Bean, W. B. Pine 1 ..... gas
22-7-6 Hotulke, Barnsdall Oil Co. 4..1,125
26-7-6 B. Larney, Carter Oil Co. 1.... dry
18-9-6 Raitman, The Prairie O. & G. Co. 1 1,080
26-7-6 Cudjo, The Prairie O. & G. Co. 3 350
Cudjo, The Prairie O. & G. Co. 4 410
24-9-5 Baker, The Prairie O. & G. Co. 4 ..... dry
36-7-6 Raglin, The Prairie O. & G. Co. & T. B. Slick 1 ..... dry
10-9-6 Community-Skiff, Carter Oil Co. 1 160
11-9-6 Community-Slick 1 1,745
12-8-5 Weaver, Shaffer O. & R. Co. 4.. 120
Ripley, Twin State Oil Co. 3 ... dry
23-7-6 Cotcha, Gypsy Oil Co. 10 ..... gas
Cotcha, Gypsy Oil Co. 11 ..... gas
Cotcha, Gypsy Oil Co. 13 ..... gas
Cotcha, Gypsy Oil Co. 14 ..... gas
Eleck, Mid-Continent Pet. Corp. 3 ..... gas
34-6-7 Harjo, Magnolia Pet. Co. 1 .... dry
17-5-8 Reed, Magnolia Pet. Co. 4 225
14-9-5 Cookey, Gypsy Oil Co. 1..... dry
18-9-6 Anderson, Magnolia Pet. Co. 1..2,400
A. Anderson, Magnolia Pet. Co. 4 2,400
17-9-7 Boring, Mariand Oil Co. 1 61
18-9-7 Johnson, Continental Oil Co. 1..2,465
12-8-5 Weaver, Pure Oil Co. 1..... dry
7-8-6 Herndon, Shell Pet. Corp. 4.....1,027
4-8-7 Reed, Magnolia Pet. Co. 1 126
22-7-6 Hotulke, The Texas Company & Independent O. & G. 2...2,403
Hotulke, The Texas Company & Independent O. & G. 3 .. 28
5-7-7 Payne, Gypsy Oil Co. 2 3,868
23-5-7 Jefferson, The Texas Company 1-A 700
6-9 6 D. Campbell, The Prairie O. & G. Co. 9..... 500
32-10-6 Marks, Papoose Oil Co. 1 562
13-9-5 Anderson, J. S. Cosden 2 ..... dry
18-9-6 Payne, Gypsy Oil Co. & Devonian Oil Co. 1 5,527
A. Anderson, Magnolia Pet Co. 2.....5,888
18-9-7 Perry, Marland Oil & Sinclair O. & G. 1 657
4-9-7 Harris, The Prairie O. & G. Co. 1 dry
18-9-7 B. Coody, Sinclair O. & G. Co. 1 1,605
2-8-5 Coker, Gypsy Oil Co. 1 1,662
12-8-5 Weaver, Shaffer O. & R. Co. 2.. dry
11-8-5 Billington, The Prairie O. & G. Co. 12 340
23-7-6 Cotcha, Gypsy Oil Co. 12.....1,090
Harris, Independent O. & G. Co. 9 1,100
D. Hotulke, The Texas Company 5 800
26-7-6 Reed, Independent O. & G. Co. 2 gas
28-7-6 Wood, Magnolia Pet. Co. 1 .... dry
33-7-6 McCann, Shaffer O. & R. Co. 1 55
19-7-8 Fish, Empire O. & R. Co. 2 ... gas
20-7-8 F. Fish, Carter Oil Co. 1 ..... gas
11-6-5 Powell, McCulloch Oil Co. 1 .... dry
15-5-7 Fleet, The Texas Company 1 dry
24-5-7 Joanna, Sunray Oil Co. & Cal. Cul. Oil 2 ..... dry
18-5-8 Peter, Sinclair O. & G. Co. 2 50
16-10-6 Hollis, McCulloch Oil Co. et al 1 ..... dry
13-9-5 Anderson, Empire O. & R. & Continental Oil 3 ..... dry
Anderson, J. S. Cosden 3 1,825
Gillim, Magnolia Pet. Co. 4 ... 700
18-9-6 Anderson, Magnolia Pet. Co. 2..6,411
17-9-7 D. Coody, Sinclair O. & G. Co. 1 525
18-9-7 Harjo, Gypsy Oil Co. 1 350
11-8-5 Fee, Magnolia Pet. Co. 3 666
8-8-8 Miller, Harris et al 1 ..... dry
23-7-6 Cotcha, Gypsy Oil Co. 15 ..... gas
Cotcha, Gypsy Oil Co. 16 ..... gas
24-7-6 Brinson, Pure Oil Co. 4 ..... gas
27-7-6 Cotcha, Empire O. & R. Co. 5 101
5-7-7 Smith, Mid-Continent Pet. Corp. 8 5,045
Phillips, Sinclair O. & G. Co. 1 3,810
9-7-7 Carr, The Prairie O. & G. Co. & T. B. Slick 1 875
7-6-8 I. Davis, Sinclair O. & G. Co. 3 2,952
3-5-7 Factor, I. T. I. Oil Co. 1 ..... dry
23-5-7 Jefferson, Sinclair O. & G. Co. 2 622
18-5-8 Lucy, The Texas Company 10 .. 607
18-6-8 Patten, The Prairie O. & G. Co. 1 3,220

Wells completed 81
Poduction 71,341
Dry 20
Gas 12
Gas production 360,000,000

STEPHENS COUNTY

34-1s-8w Burke, Hupp & Duff 5 60
Simpson, Lone Eagle Oil Co. 10 115
2-2s-8w Gilworth, Ven Mex Oil & Mid-Continent Pet. 1-C 7
4-3s-7w Yates, Ellis Drlg. Co. 1 ..... dry
25-1 -9w Ketchem, Ellis Drlg. Co. 3... dry
27-2- 8w Shaw, Smythe et al 3 ..... dry
13-1s-4w Davidson, Clarke & Cowden 4 120
31-1 -8w Brymer, Shaner et al 3 ..... gas
34-1s-8w Simpson, Lone Eagle Oil Co. 11 100
12-1s-4w Hansen, Amerada Pet. Corp. 5 167
24-1s-4w Franklin, Wirt Franklin Pet. Corp. 9 748
8-2s-4w Quackenbush, Magnolia Pet Co. 10 ..... dry
22-3s-9w King, Pelwin Oil Co. 1 ..... dry
19-1 -8w Funk, Four In One Oil Co. 1 dry
3-2s-8w Bush, Van Mex Oil Co. & Mid-Continent Pet. 1-B 13
13-2s-8w McMasters, Pace et al 5 50
34-1s-8w Burke, Hupp & Duff 6 ..... gas
Simpson, Lone Eagle Oil Co. 12 ..... gas
Burke, Magnolia Pet. Co. 10 .. 90
Night, Ven Mex Oil & Mid-Continent Pet. 7 40
2-2s-8w Houston, Pace & Texhoma Oil Co. 3..... dry
McMaster, Pace et al 6 ..... dry
21-2s-7w Watkins, Pace et al 1 300

Wells completed 23
Production 1,809
Dry 8
Gas 3
Gas production 22,000,000

WAGONER COUNTY

29-18-15 Henry, M. H. Gleason 6 ..... dry
25-17-16 White, Lasarsky et al 7 ..... dry
12-16-15 Barnett, Knox & Shouse 1-A 15
26-18-15 Drew, J. E. Martin et al 2... 30
29-18-15 Henry, Frigel & Barth 3..... dry
19-17-16 Bruner, Perry & Hartman 1-A dry
22-18-17 Childers, Ash Bros. 1-A ..... gas
6-16-16 Smith, S. F. Webb et al 1 10

Wells completed 8
Production 45
Dry 4
Gas 1
Gas production 1,250,000

MISCELLANEOUS COUNTIES

Beckham County—
27-9-23w Porch, E. L. Martin 1 ..... gas
30-8-25w Rogers, Benedum & Trees 1 dry

Cotton County—
24-2s- 9w Hundley, Leath & Denver & Wichita Falls P. L. Co. 1.. dry
3-2s 10w Sanders, Lawton Oil Corp 2 gas
2-2s-10w Moore, Clifford Moore 3 115
3-1s-10w Bull, Headrick et al 1 ..... dry
4-2s 10w Patterson, Cullum & Perkins 1 ..... dry
2-2s-10w Chambers, Silurian Oil & Perkins & Cullum 1-P 40
35-3s-12w Brown, W. H. Herbor 1 .... dry
2-2s-10w Chambers, Silurian Oil Co. 2-P 37
Chambers, Moore et al 3 40

Dewey County—
9-18-15w Perfect, Huckelby & McCoy 1 dry

Grant County—
15-27-3w Fee, Champlin O. & R. Co. 1 dry
24-28-3w Connell, Consolidated Utility Co. 1 ..... dry
1-27-3w Nelson, Boucher et al 1 ..... dry

Jefferson County—
34-6s-5w Seay, O. V. Beck 3 200
Seay, Cox & Robinson 1 70
10-4s-8w Sanders, Roy Johnson & Wirt Franklin Pet. Corp. 1 .... dry
2-7s-7w Nesmith, Gypsy Oil Co. et al 1 dry
24-6s-5w Seay, Beck & Lapham 4 30

Logan County—
30-19-4w Sebranek, Shell Pet. Corp. 5 1,447
19-19-4w Shaffer, Shell Pet. Corp 1 .. gas
Shaffer, Shell Pet. Corp. 2 ... 35
20-19-4w Shaffer, J. E. Crosbie 5 100
20-19-4w McCully, Shell Pet. Corp. 8...6,833
21-18-4w Quigley, Blackwell O. & G. Co. 1 ..... gas
16-18-4w Gragg, Continental Oil Co. 2.. 10

Cherokee County—
25-16-19 Willey, Shell Pet Corp. 1 .... dry

Haskell County—
3-9-18 Phillips, Charles Holden 1 .... gas

Kiowa County—
22-6-17w Suhren, E. M. Boring 1 ..... dry
18-6-16w Prough, Cummings et al 2 ... dry
19-6-16w Ditmar, J. M. Ruhl 1 ..... dry

Noble County—
33-21-1w Waltermire, The Prairie O. & G. & T. B. Slick 1 ..... gas

Tillman County—
25-1s-18w Zweig, Wirt Franklin Oil Corp. 1 ..... dry

Tulsa County—
1-18-12 Barnett, Mitchell County Oil Co. 1 ..... dry
9-16-14 Davis, C. L. Sherman, 1 ..... dry

Grady County—
24-4-8w Ridley, Meridian Gas Co..... gas

Garfield County—
19-23-3w Whipple, Marland Oil Co. 2.. gas

Oklahoma County—
24-11-3w Fortson, Mid-Kansas O. & G. Co. 2 6,735

Payne County—
13-19-1w Barnes, Gardner et al 1 .... dry

Lincoln County—
19-16-5 Seabo, T. P. C. & O. Co. 1 .... dry

Rogers County—
24-24-16 Crosby, Tidal Oil Co. 9 2

Nowata County—
27-27-16 Dilley, Pure Oil Co. 12 5
28-27-16 Robbins, Pure Oil Co. 13 5
21-27-16 Denman, Pure Oil Co. 12 10
27-27-16 Dilley, Pure Oil Co. 14 10
Dilley, Pure Oil Co. 13 10
21-27-16 Denman, Pure Oil Co. 12 10
12-25-14 Fee, Lula M. Heffner 15 5
33-26-15 Thornton, Pure Oil Co. 6 6

Washington County—
31-26-14 Jordan, J. A. Keller 1 5
Wells completed 51
Production 15,760
Dry 20
Gas 8
Gas production 124,100,000

KANSAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	17	1,800	4	..
Cowley	6	989	3	1
Greenwood	19	2,480	7	..
Sedgwick	36	16,853	10	..
Miscellaneous	35	2,100	19	2
Total July	113	24,222	43	3
Total June	75	19,256	31	5
Difference	38	4,966	12	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	6	28	34
Cowley	5	12	17
Elk	3	12	15
Ellis	4	8	12
Greenwood	6	32	38
Harvey	1	11	12
McPherson	3	13	16
Marion	1	16	17
Russell	2	5	7
Sedgwick	9	61	70
Sumner	8	11	19
Woodson	1	11	12
Miscellaneous	6	74	80
Total July	55	294	349
Total June	59	286	345
Difference	4	8	4

WELLS COMPLETED

BUTLER COUNTY

11-27-5 Marshall, Empire O. & R. Co., 1-C ..... dry
22-27-5 Cranston, Empire O. & R. Co., 3 150
13-27-5 Morgan, H. B., Garden 1 ..... dry
8-24-6 Cameron, Smith & Ashe 1 .... dry
28-25-4 Pierce, Allison & Fitzwilliams 3 20
10-26-3 Ciancy, Lario O. & G. Co..... 400
14-27-5 Zeist, Slick & Connell 1 ..... dry
22-27-5 Cranston, Empire O. & R. Co. 200
31-24-4 Maxwell, Maxwell Pet. Corp. 1 25
27-27-5 Hutchinson, Empire O. & R. Co. 7-B 310
29-26-5 Kinney, Leonard Pet. Co. 6 25
6-27-6 Sliss, H. B., Garden 4-B 35
10-27-6 Marshall, Rosenthal et al 4.... 75
18-26-5 Hess, Empire O. & R. Co. 18.... 200
19-26-5 Koogler, Empire O. & R. Co. 81 100
34-27-5 Hutchinson, Empire O. & R. Co 3-A 200
9-27-6 Tatum, Phillips Pet. Co. 4 60
Wells completed 17
Production 1,800
Dry 4

COWLEY COUNTY

16-32-4 Hedrick, Blankenship & Washoma Oil 1 ..... dry
15-32-4 Youle, The Prairie Oil & Gas Co. 5 914
8-31-8 Fee, Continental Oil Co. et al 1 dry
4-32-5 McEwin, Krow White 1 ..... gas
36-34-3 Refinery site, Foster et al 1... dry
30-31-6 Sitton, Lewis Prod. Co. 1..... 75
Wells completed 6
Production 989
Dry 3
Gas 1
Gas production 250,000

GREENWOOD COUNTY

15-22-12 Holderman, Empire O. & R. Co. 1 50
22-22-12 Pees, Shell Pet. Corp. 1 10
19-23-10 Raee, Independent O. & G. Co. 3 ..... dry
35-25-10 Graham, White Oil Co. 8 70
15-25-11 Prather, The Prairie O. & G. Co. 1 ..... dry
9-22-10 McCray, Phillips Pet. Co. .... dry
10-22-10 Pixlee, Transcontinental Oil Co. 5 ..... dry
11-22-10 Brown, The Prairie O. & G. Co. 2 ..... dry
22-22-12 Norton, Empire O. & R. Co. 2-A 45
15-24-12 Johnson, The Prairie O. & G. Co. 3 30
10-22-10 Pixlee, Transcontinental Oil Co. 4 700
15-22-12 Holderman, Empire O. & R. Co. 2 50
21-23-11 Edwards, Empire O. & R. Co. 2-B 800
21-23-11 Edwards, The Texas Co. 5-C.. 350
36-23-11 Patterson, Empire O. & R. Co. 2-A 225
36-23-11 Holland, Transcontinental Oil Co. 1 ..... dry
2-24-10 Dales, Reed et al 1-A ..... dry
5-24-13 Sharp, Sheedy et al 3 100
17-24-13 Alliss, Shull Drlg. Co. 1 50
Wells completed 19
Production 2,480
Dry 7

SEDGWICK COUNTY

1-26-1w Carr, Bu-Vi-Bar Pet. Corp. 3 1,366
Carr, Bu-Vi-Bar Pet. Corp. 4 1,005
Wilson, Skelly Oil Co. & Wilson 8 1,250
6-26-1 Bright "A," Bu-Vi-Bar Pet. Corp, et al 2 ..... dry
T. Goodrich, Bu-Vi-Bar Pet. Corp. et al 5 ..... dry
Gorman, Derby Oil Co. 4 ... 625
Scherger, Tidal Oil Co. 3 240
7-26-1 Rothfuss, Bu-Vi-Bar Pet Corp. et al 1 71
5-26-2 Newman, Shawnee Oil Co. 1 .. dry
14-26-2 Hamant, Gypsy Oil Co. 2 1,335
15-26-2 Fischer, Shell Pet. Co. 1 784
20-28-1 Robbins, White Eagle O. & R. Co. 1 160
12-26-1w Wright, Bu-Vi-Bar Pet. Corp. et al 3 1,608
6-26-1 Bright "B," Bu-Vi-Bar Pet. Corp. et al 4 434
6-26-1 Creason, Robertson et al 1 700
7-26-1 Shawver, Bu-Vi-Bar Pet Corp. et al 3 658
36-25-1w Valley Center, Richards & Haun 1 ..... dry
28-25-1w Corn, Morgan et al 1 ..... dry
1-26-1w Corr, Bu-Vi-Bar Pet. Corp. et al 6 648
7-26-1w Shawver, Bu-Vi-Bar Pet. Corp. 6 1,276
14-26-2 Hamant, Gypsy Oil Co. 3 170
16-25-1 Black, Continental Oil Co. 1.. 200
1-26-1w Corr, Bu-Vi-Bar Pet. Corp. 5 1,100
Reed, Bu-Vi-Bar Pet. Corp. 1 950
12-26-1w Lantz, Bu-Vi-Bar Pet. Corp. 2 18
7-26-1 Shawver, Bu-Vi-Bar Pet Corp. 7 760
Miles, Bu-Vi-Bar Pet. Corp. 1 93
6-26-2 Swenson, Patton & Wentz .1 190
1-27-1 Tuttle, Washooma Oil Co. & Blankenship 1 ..... dry
36-28-2w Wise, Magnolia Pet. Co. 1 .. dry
20-28-1 Nolan, Geo. P. Dickey et al 1 252
21-28-1 Campbell, Hartman & Skaer 1 dry
Nolan, Shell Pet. Corp 1 160
1-26-1w Wilson, Skelly Oil Co. & Davis 9 710
20-26-1 Hardin, Kroder et al 1 ..... dry
31-26-2 Jones, Producers Oil Co. 1 .... dry
Wells completed 36
Production 16,853
Dry 10

MISCELLANEOUS COUNTIES

Anderson County—
16-23-18 Moore, Rylands et al 1..... dry

Chautauqua County—
1-32-8 Westerfield, Syndicate Oil Corp. 1 ..... dry

Chase County—
35-22-9 Schambaugh, Selby O. & G. Co. 7 20

Coffey County—
17-23-14 Drapes, Cross et al 1 ..... dry
27-21-17 Marshall, R. Morrison 9 10

Edwards County—
31-25-15w McCarthy, British American O. & G. Co. 1 40

Ellis County—
20-12-17-w Schmeisler, Phillips Pet. Co. 1 50
15-14-16 Robben, T. C. Johnson et al 1 dry

Elk County—
12-30-9 Brown, Barber et al 1 ..... dry
12-31-10 Spray, Frantz et al 1 ..... dry

Harvey County—
36-22-1 Gatz, The Prairie O. & G. Co. 1 dry

Lyon County—
33-21-11 Milner, Stats & Spencer 1 .... dry

Marion County—
3-18-3 Jirak, The Prairie O. & G. Co. et al 1 ..... dry
28-18-3 Kline, Hartman & Skaer and White Eagle O. & R .1 .... dry

McPherson County—
11-19-2w Decker, McPherson O. & G. Dev. Co. 1 .....18,000,000 gas
1-20-2w Ritz, Shell Pet. Corp. 1 1,100

Morris County—
35-15-15 Smith, Hiatt et al 1 ..... dry
15-16-7 Midcalf, General Utilities Co. 1 .....500,000 gas

Montgomery County—
8-34-17 Barber, Gertrude Edchen 16.. 2
11-34-13 Kelso, J. P. Brady 1 35

Neosho County—
23-28-19 Christoph's, John Jelinek et al 10 4
33-27-19 Johnson, Isa D. Bigham 25.... 10
Johnson, Isa D. Bigham 26.... 10

Osborne County—
30- 9-14w Christ, Empire O. & R. Co. 1 dry

Ottawa County—
28-10-2w Ottawa County Bank, Anderson et al 1 ..... dry

Rooks County—
20- 9-18w Sandberg, The Prairie O. & G. Co. 1 ..... dry

Rush County—
27-17-17w Schwartzkoff, Wilcox Oil & G. Co. 1 ..... dry

Russell County—
32-13-15w Mermas, Keys Pet. Co. 11 .. dry
32-12-14w Solback, Phillips Pet. Co. 1.. dry
31-12-15w Jacobs, The Texas Co. 1..... 60

Smith County—
4- 2-13w Lambert, Mid-Kansas O. & G. Co. 1 ..... dry

Sumner County—
26-34-2 Curry, Marland Oil Co. 1 495
9-30-2w Love, Champlin O. & R. Co. 2 70
35-30-2w Frantz, De Forest Oil Co. 3.. dry

Trego County—
20-13-21w King, Central Commercial Oil Co. 1 194
Wells completed 35
Production 2,100
Dry 19
Gas 2
Gas production 18,500,000

WEST TEXAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Crane	1	....	1	..
Fisher	3	....	3	..
Garza	1	25	..	..
Howard	11	2,555	1	..
Irion	2	....	2	..
Jones	6	20	5	..
Loving	1	248	..	..
Mitchell	2	30	1	..
Pecos	12	32,485	6	..
Reagan	2	215	..	..
Reeves	1	....	1	..
Runnels	1	....	1	..
Sterling	1	....	1	..
Tom Green	1	....	1	..
Ward	2	124	1	..
Winkler	14	9,008	1	..
Total July	61	44,720	25	..
Total June	64	92,449	25	..
Difference	3	47,729	..	..

Summary of Rigs and Wells Drilling

County—	Rigs	Wells Drlg.	Wells S.D.	Ttl.
Crane	2	12	..	14
Crockett	1	4	4	9
Fisher	1	5	2	8
Glasscock	2	8	1	11
Howard	8	26	7	41
Jones	2	14	2	18
Mitchell	..	5	1	6
Pecos	35	35	15	75
Reagan	7	5	1	13
Runnels	..	1	3	4
Upton	2	1	..	3
Ward	4	8	..	12
Winkler	7	13	6	26
Miscellaneous	8	28	38	74
Total July	69	165	80	314
Total June	67	153	76	296
Difference	2	12	4	18

WELLS COMPLETED

CRANE COUNTY

University, Prairie O. & G. Co. 7..... dry

FISHER COUNTY

Hall, The Texas Company & Phillips Pet Co. 1 ..... dry
Hughes, White Eagle O. & R. Co. 1.. dry
Cleveland, Gilman & McMurray 1 .... dry

GARZA COUNTY

Reed, Emerald Oil Co. 1..... 35

HOWARD COUNTY

Dora Roberts, Amerada Pet. Corp. 10.. 800
Clay, Humble O. & R. Co. 3..... 500
Harry Hyman, Magnolia Pet. Co. 2..... 20
Harry Hyman, McGinley-Sigler & Sun Oil Co. 1 ..... dry
Dora Roberts-E, Moody Corp. 12..... 115
Dora Roberts-E, Moody Corp. 14..... 130
Dora Roberts-A, Schermerhorn Oil Co. 6 75
Dora Roberts-Lease 1, The California Co. 1 40
Dora Roberts-Lease 2, The California Co. 6 700
Dora Roberts-E, Moody Corp. 15 125
Dora Roberts-E, Moody Corp. 18 50
Completions 11
Production 2,555
Dry holes 1

IRION COUNTY

Nutt, Kimbrough & Tuel 1..... dry
Abe Meyer, Wittmer Oil & Gas Properties 1 ..... dry
Dry holes 2

JONES COUNTY

Goodman, Brewer 1..... dry
Britton, Callahan & Worth Oil Co. 1.. dry
Willis, Gilman & McMurray 1 ..... dry
Hodges, Treat Oil & Gas Co. 1..... dry
Tiner, Grisham-Hunter Corp. 2 ..... dry
Pomroy, Phillips Pet Co. 4 20
Completions 6
Production 20
Dry holes 5

LOVING COUNTY

Hazell, Lockhart & Co. 2 248

MITCHELL COUNTY

Brown, Spence et al, 1 ..... dry
Clark, Lee, 2, The California Co. 2.... 30
Completions 2
Production 30
Dry holes 1

PECOS COUNTY

Smith et al Tr-B, Gulf Prod. Co. 18.. 1,440
Myrtle Sellman, Alexander & Lyle, 1.. dry
Trees, Atlantic Oil Prod. Co. 1 ..... dry
Yates-A, Mid-Kansas O. & G. Co. 29.. 6,018
Yates-H, Mid-Kansas O. & G. Co. 9 ..3,768
Ramsey, Phillips Pet. Co. 2 1,344
University, Shell Pet. Corp. 1..... dry
University, Harry Adams Co. 1..... dry
Yates-A, Mid-Kansas O. & G. Co. 28..19,800
I. G. Yates, Rio Pecos Oil Co. 2 ..... dry
University, Taylor-Link Oil Co. 1 115
Bowser, Phillips Pet. Co. 1 ..... dry
Completions 12
Production 32,485
Dry holes 6

REAGAN COUNTY

University, Big Lake Oil Co. 162 5
University, Big Lake Oil Co. 165 210
Completions 2
Production 215

STERLING COUNTY

Foster, F. & G. Oil Co. 1 ..... dry

REEVES COUNTY

E. G. Bowles, Robt. Penn et al, 1 ..... dry

RUNNELS COUNTY

Cramer, Nourse & Tilton, 1 ..... dry

WARD COUNTY

Lee Monroe, Barstow Oil & Gas Co. .. dry
O'Brien et al, Gulf Prod Co. 5 124
Completions 2
Production 124
Dry holes 1

TOM GREEN COUNTY

Willeke, Williams and others, 1 ..... dry

WINKLER COUNTY

Scarborough, Shell Pet. Corp. et al, 6.. 115
Fred Leck, Skelly Oil Co. 2 1,272
Hendrick T-88-U, Southern Crude, 8 .. 104
Hendrick-C, Skelly Oil Co. 2..... dry
Hendrick T-88-P, Southern Crude, 2... 250
Hendrick-C, Lse. 2, Humble O. & R Co. 12 134
Ida Hendrick T-88-H, Southern Crude, 7 15
Hendrick T-88-CX, Southern Crude, 3.1,440
Scarborough, Tidal Oil Co. 1..... 228
Hendrick CX, Southern Crude, 3 320
Hendrick T-88-M, Southern Crude 33..4,440
Hendrick T-88-N, Southern Crude 6..... 90
Hendrick T-88-R, Southern Crude, 3 ... 402
Walton-A, Humble O. & R. Co. 1 200
Completions 14
Production 9,008
Dry holes 1

NORTH CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Archer	72	2,167	38	
Brown	22	582	11	1
Callahan	9	158	5	..
Clay	1	32	..	..
Coleman	30	4,711	16	2
Comanche	1	....	1	..
Cooke	10	247	8	..
Eastland C	16	815	7	1
Erath	3	....	..	3
Foard	2	188	1	..
Haskell	3	54	2	..
Jack	7	1,201	3	..
Montague	2	95	..	..
Palo Pinto	3	40	..	2
Shackelford	21	583	13	..
Stephens	6	130	3	..
Throckmorton	5	65	3	..
Wichita	31	1,569	12	..
Wilbarger	61	6,533	16	..
Young	31	6,514	16	..
Total July	336	25,684	155	9
Total June	338	13,711	167	14
Difference	2	11,973	12	5

Summary of Rigs and Wells Drilling

County—	Rigs	Wells Drlg.	Wells S.D.	Ttl.
Archer	10	31	5	46
Brown	5	21	13	39
Callahan	3	11	5	19
Coleman	12	26	3	41
Cooke	4	14	2	20
Clay	..	3	2	5
Eastland	11	29	6	46
Erath	2	4	6	12
Haskell	..	4	1	5
Jack	5	19	8	32
Montague	..	2	2	4
Palo Pinto	1	4	6	11
Shackelford	3	20	4	27
Stephens	1	21	4	26
Throckmorton	1	4	1	6
Wichita	12	48	5	65
Wilbarger	24	94	12	130
Young	5	25	11	41
Miscellaneous	7	13	14	34
Total July	106	393	110	609
Total June	116	323	105	544
Difference	10	70	5	65

WELLS COMPLETED

ARCHER COUNTY

Taylor-A, Fain-McGaha Oil Corp. 4 55
Thompson, Gwynn-Boyd Drl. Co. et al 3 125
Wilson, Ht-Land Oil Co. 1 .... dry
Taylor, Holcombe & Jones 1 .... dry
Perkins & Cullum, Perkins & Cullum 2 .. dry
Taylor, Pet. Producers Co. 1 .... dry
Wilson, Pois & Johnson 3 .... dry
Andrews, Atlantic Oil Prod. Co. & Ven-Mex Oil Co. 2 .... dry
Richardson-B, Continental Oil Co. 5 66
Prideaux, Estacado Oil Co. et al 2 8
Logan-A, Fain-McGaha Oil & Humble O. & R. Co. 3 .... dry
Graham, Grebin 1 .... dry
Richardson, Madden 18 24
Kunkel-B, Pet. Prod. Co. et al 3 215
Taylor, Brown-United Prod. Co. 4 73
McCrory Tr. "M," L. T. Burns 2 25
Wilson-N, L. T. Burns et al 1 .... dry
Parkey-C, Empire Gas & Fuel Co. 1 .... dry
Taylor-A, Fain-McGaha Oil Corp. 5 60
McCrory Tr. H. Hines et al 1 .... dry
Turbeville-B, Humble O. & R. Co. 1 .... dry
Parrish-A, Payne et al 5 20
Lyles, Jim Turner 1 .... dry
Falls County School Land, Continental Oil Co. 1 42
Richardson-B, Continental Oil Co. 6 .... dry
Prideaux, Estacado Oil Co. et al 3 .... dry
Logan-A, Fain-McGaha & Humble O. & R. Co. 2 30
Roach, C. W. Gilliland, 3 35
Kunkel, Humble Oil & Ref. Co. 4 320
Justice, C. M. Johnson et al 1 .... dry
Farmer, C. B. Long et al 4 .... dry
Lane, McCarty et al 1 .... dry
Richardson, Moran Drl. Co. & Ruff. W. 1 .... dry
Long, Pandem Oil Corp. 1 .... dry
Kunkel-B, Pet. Production Co. et al 4 .. 144
Richardson, Block 13, Prairie O. & G. Co. 4 87
Wilson-B, The Texas Company 1 .... dry
Treet, W. C. Young 1 .... dry
Brown, Brown Farm Oil Co. 5 25
Durham et al, Clark & Kruger 1 .... dry
Gwynn & Cranfill, Fain-McGaha Oil Corp. 1 .... dry
Wilson-B, Gohlke 6 17
Hawley, Hammond 1 .... dry
Campbell, Kembrow Prod. Co. 7 .... dry
Lyles, Shappell Oil Co. 7 60
Turbeville-A, Tidal Oil Co. 5 .... dry
C. W. Wallace, C. W. Wallace 5 80
Peters, Boller 1 .... dry
Hennig, Freeman 5 .... dry
Logan-B, Humble O. & R. Co. & Fain-McGaha Oil Corp. 9 50
Anderson-A, Madden 1 .... dry
Green-C, Maxson & Prairie O. & G. Co. 1 7
Kunkel-B, Pet. Producers Co. et al 5 .. 101
Richardson, Block 13, Prairie O. & G. Co. 5 93
Andrews, Underwood Drl. Co. & Atlantic Oil Prod. Co. 1 .... dry
Oil Investment Co., Gwynn-Boyd & Archer Drl. Co. 2 90
Thompson, Gwynn-Boyd Drl. Co. et al 4 175
Hutcheson, Frank Hutcheson 1 .... dry
Matthews, Johnson et al 1 .... dry
Wilson, Perkins & Cullum 10 15
Wilson, United Prod. & Pet. Prod. Co. 1 24
Logan et al, Bridwell Oil & Continental Oil 2 12
Falls County School Land, Continental Oil 2 4
Richardson-B, Continental Oil Co. 7 25
Prideaux, Estacado Oil Co. et al 4 .... dry
Hennig, Freeman 6 20
Logan-B, Humble O. & R. Co. & Fain-McGaha Oil Corp. 10 25
Chancellor, Long 1 .... dry
Schlegel, Madden & Junker 1 .... dry
Garvey, Rogers et al 1 .... dry
Prideaux, W. H. Smith, Jr. 5 6
Inman et al, Wise & Jackson 1 .... dry

Completions 72
Production 2167
Dry holes 38

BROWN COUNTY

Woods, Barnhill & Palmer 1 .... dry
Cross, Buder, Trustee 4 120
Robertson, Cranfill & Reynolds 1 .... dry
Armstrong, Humble O. & R. Co. 19 44
Counts, Diggs 1 .... dry
Martin Hrs., Evans 1 60
Robertson, Drake et al 1 .... dry
Armstrong, Humble O. & R. Co. 20 100
Tervooren, Humble O. & R. Co. 3 .... dry
Smith, George McClung 2 18
Riordan, Riordan et al 2 .... dry
Leatherwood, Anderson 5 .... dry
Armstrong, Humble Oil & Ref. Co. 21 .. 55
Keeler, Mitcham 2 .... dry
Cannon, Owens, Inc. et al 1 25
Hickman, Ven-Mex Oil Co., 5 120
Sagg, McClung & Hickey 1 .... gas
Sanderson, Mattocks et al 1 .... dry
White Hrs., Baker Bros. 2 .... dry
Bull, Cen-Tex Ref. Co. 2 15
Caldwell, Sinclair Oil & Gas Co. 1 .... dry
Hickman, Ven-Mex Oil Co. 24 25

Completions 22
Production 532
Dry holes 11
Gas wells 1
Gas production 800,000

CALLAHAN COUNTY

McFarland, Barnhart 2 .... dry
Miller, Bradstreet & Holden 13 35
Cavenaugh, Holden et al 1 75
Howell, Stalker Oil Co. 1 .... dry
Cavenaugh-A, Bradstreet & Holden 2 .. 30
Gorey, Humphrey Bros. 8 18
Walker, McLeary, Conway et al 1 .... dry
Westerman, T. P. Coal & Oil Co. 14 .. dry
Biggerstaff, Warren & Hays 1 .... dry

Completions 9
Production 158
Dry holes 5

CLAY COUNTY

Stine et al-D, Mid-Continent Holding Co. 1 32

COLEMAN COUNTY

Webb, Clark, Cowden et al 1 .... dry
Morris-B, Eastland Oil Co. 3 400
Casey, Hoffman & Page et al 1 .... dry
Davis, Jackson & Veihl 1 .... dry
Stevens, Roth & Faurot 4 .... dry
Godwin, Stout & Preston 1 3
Vaughn, Vaughn et al 1 .... dry
Mills, Owens, Inc. et al 1 .... dry
Overall-B, Continental Oil Co. et al 2 .. 42
Overall, Continental Oil Co. et al 8 5
Farmer, Barbree & Ross 1 .... dry
Keeney-A, Eastland Oil Co. et al 2 1100
Keeney-A, Eastland Oil Co. et al 3 .... gas
Keeney, Mid-West Exploration Co. 2 .. 87
Boyle; Simpson, White & Pinkerton 1 .. dry
Young Bros., S. J. Taylor 2 .... dry
Flippen, Tidal Oil Co. 1 .... dry
Overall, Continental Oil Co. et al 12 .. 40
Johnson, Green & Midsun Oil Corp. 1 .. dry
Dalton, Weathered 1 .... dry
Bennett, Broderick & Calvert 1 .... dry
Morris-A, Eastland Oil Co. 7 273
Keeney, Mid-West Expl. Co. 1 671
Jamison, Mitchell & Groves 1 .... dry
Morris, White Eagle O. & R. Co. 1 1890
Turner Est., Brown et al 1 .... gas
Overall, Continental Oil Co. et al 5 160
Haas, Foster et al 3 40
Long, Holliday et al 1 .... dry
Vaughn, Wilmott 1 .... dry

Completions 30
Production 4711
Dry holes 16
Gas wells 2
Gas production 60,391,000

COMANCHE COUNTY

Echols, T. P. Coal & Oil Co. 1 .... dry

COOKE COUNTY

Stark, Lloyd Oil Corp. 1 .... dry
Huggins, Fain-McGaha Oil Corp. 1 220
Goff, Benson Bros. et al 1 .... dry
Embry, The Texas Company 1 .... dry
Haverkamp, Benson Bros. 1 27
Inglish, W. E. Ferguson et al 1 .... dry
Hair, Kewanee Oil & Gas Co. 2 .... dry
Embry, The Texas Company 1 .... dry
Huey, Comet Pet. Co. 1 .... dry
Field & Bowers, Humble O. & R. Co. 1 .. dry

Completions 10
Production 247
Dry holes 8

EASTLAND COUNTY

Harbin, Alworth Trustee 2 .... dry
Simmons, Conway Bros. & Champion 4 dry
Foster, Lewis & Moore et al 2 115
Good, Belva Oil Co. 7 25
Phillips, Arab Gasoline Corp. 1 110
Craiget al, Davies et al 1 .... dry
Kimbrough, Hickok P. & D. Co. 3 .... dry
Hise Est., States Oil Corp. 6 .... dry
Higginbotham, T. P. Coal & Oil Co. 4 .. 30
Parker, Goodwin et al 3 .... dry
Stennett, Belva Oil Co. 1 450
Adams, Brannon & Murray 1 .... gas
Turner, Crabb, McNeel & Canyon Oil & Gas Co. 3 35
Morgan, Porter Dev. Co. 1 .... dry
Palmer, Texwa Oil Co. & Kirk 1 30
Turner, Texwa Oil Co. & Kirk 2 20

Completions 16
Production 815
Dry holes 7
Gas wells 1
Gas production 9,750,000

ERATH COUNTY

Evatt, Associated Prod. Co. 1 .... gas
Cage & Mulloy, Fletcher & Moore 1 .. gas
Cox, Shaw et al 1 .... gas

Completions 2
Gas wells 2
Gas production 9,081,678

FOARD COUNTY

Tarver, Shell Pet. Corp. 1 188
Phillips, Bass & Dillard 1 .... dry

Completions 2
Production 188
Dry holes 1

HASKELL COUNTY

Reynolds, Superior Oil Corp. 4 54
Reynolds, Edmiston 1 .... dry
Reynolds, Edmiston 2 .... dry

Completions 3
Production 54
Dry holes 2

JACK COUNTY

Moore, Dorian et al 1 .... dry
Leffel-Box, F. H. E. Oil Co. 2 691
Leffel-Box, F. H. E. Oil Co. 3 175
Maxey, C. A. Fluety 1 .... dry
Bryson, Prairie O. & G. Co. 4 249
Loving, C. E. Rogers et al 1 .... dry
Bryson, Prairie O. & G. Co. 5 86

Completions 7
Production 1201
Dry holes 3
Gas production 5,000,000

MONTAGUE COUNTY

Edmondson, Bridwell Oil Co. 2 65
Cunningham-A, Farlyn Oil Co. 1 30

Completions 2
Production 95

PALO PINTO COUNTY

Hart, Ash Syndicate 2 40
Cos.ello, Brazos River Gas Co. 2 .... gas
Wester, Brazos River Gas Co. 4 .... gas

Completions 3
Production 40
Gas wells 2
Gas production 15,500,000

SHACKELFORD COUNTY

Cook-A, Section 82, Roeser & Pendleton & Marland 6 375
Whitney, Shaheen et al 1 .... dry
Whitney, Amerada Pet. Corp. 1 .... dry
Moberly-B, Cranfill & Reynolds 3 .... dry
Nall, B. P. Fenoglia 1 .... dry
Reynolds Cattle Co., Hughes et al 1 .... dry
Cook-A, Section 61, Roeser & Pendleton & Marland 41 60
Cook-A, Section 61, Roeser & Pendleton & Marland 42 45
Cook-A, Section 62, Roeser & Pendleton & Marland 13 50
Russ-Webb, Big State Oil Co. 8 .... dry
Flippen-G, Cranfill & Reynolds 1 .... gas
Newell, Humble Oil & Ref. Co. 2 18
Bowman, Moutray Oil Co. 1 .... dry
Cook-A, Section 88, Roeser & Pendleton & Marland 4 25
Cook-A, Section 146, Roeser & Pendleton & Marland 1 .... dry
Whitney, Shaheen 2 .... dry
Reynolds-B, Texas Consolidated Oil Co. 1 10
Flippen-G, Cranfill & Reynolds 2 .... dry
Davis, Grisham-Hunter Corp. 2 .... dry
Matthews, Gilman & McMurray 4 .... dry
Davis-B, Humble O. & R. Co. 5 .... dry

Completions 21
Production 583
Dry holes 13
Gas wells 1
Gas production 15,100,000

STEPHENS COUNTY

Dannehold, Mid-West Expl. Co. 1 .... dry
Pierce, T. P. Coal & Oil Co. 4 10
Ellis, Chastain & Donley 1 .... dry
Cunningham, Mid-Tex Pet. Co. 9 20
Smith, T. P. Coal & Oil Co. 2 100
Winston, T. P. Coal & Oil Co. 3 .... dry

Completions 6
Production 130
Dry holes 3

THROCKMORTON COUNTY

Overcash, Conway Bros. & Woodson Oil Co. 3 35
Walker, Cranfill & Reynolds 1 .... dry
Reynolds, Herbert Oil Co. 1 .... dry
Reynolds, McCurdy & Haile 1 .... dry
Upshur County Schl. Land, Shappell Oil Co. 2 30

Completions 5
Production 65
Dry holes 3

WICHITA COUNTY

Jennings-C, Bullington et al 4 .... dry
Burnett-A, H. Hines 6 55
McCarty, Lee 3, Mrs. Laning, Admx. 10 dry
Allen Kemp, United Prod. Co. 1 175
Hoge, Barclay & White 1 .... dry
Bradley, Hammon 2 26
Waggoner Bros.-C, T. F. Hunter 3 60
Mitchell, Jackson, Jr. et al 1 .... dry
Donehoo, Magnolia Pet. Co. 14 21
Preston, Ray et al 1 .... dry
Burnett, Panhandle & VenMex Oil Co. 7 dry
Michie-A, Riner & Bailey 6 75
Michie-C, Riner & Bailey 1 15
Waggoner Bros., The Texas Company et al 7 220
Waggoner Bros., Golding Cochran 6 210
Hines-Burnett, Humble & Hines 1 .... dry
Hamilton, J. D. Proctor 1 .... dry
Michie-A, Riner & Bailey 7 75
Parker, Reno & Goldsmith 1 .... dry
Anderson Patterson, Stump & Empire G. & F. Co. 1 .... dry
Chilson, Block 9, E. J. Stump et al 1 .. 100
Morgan, American Ref. Props. 6 50
Kemp & Kempner, Arkansas Nat. Gas Co. 17 55
Charles Pettit, Fain McGaha Oil Corp. 1 dry
Waggoner Bros., Golding & Cochran 5 .. 17
Friberg, Hunter 1 .... dry
Waggoner Bros.-C, Hunter 4 45
Boyd, King Royalty Co. 5 45
Michie-B, Riner & Bailey 5 75
Waggoner Bros., Rowe et al 4 40
Waggoner Bros., The Texas Company et al 6 240

Completions 31
Production 1549
Dry holes 12

WILBARGER COUNTY

Waggoner-P, Consolidated Oil Co. 1 .. dry
Waggoner-R, Consolidated Oil Co. 1 .. dry
Waggoner-B, Empire Gas & Fuel Co. 11 100
Waggoner-B, Empire Gas & Fuel Co. 12 110
Waggoner-C, Empire Gas & Fuel Co. 5 .. 138
Waggoner-W, Fain McGaha Oil Corp. 6 10
Waggoner-W, Fain McGaha Oil Corp. 8 87
Waggoner (Boggy Creek), Gray Back Dev. Co. 2 101
Waggoner-B, King Royalty Co. 1 250
Waggoner-A, Knight 3 165
Waggoner-F, Knight 1 250
Waggoner-B, Staley Wynne & Co. 4 125
Waggoner-I, Burton 4 43
Waggoner-O, Consolidated Oil Co. 3 195
Waggoner-L, Fain-McGaha Oil Corp. 11 80
Waggoner-W, Fain-McGaha Oil Corp. 7 85
Waggoner-Y, Fain-McGaha Oil Corp. 2 .. 100
Waggoner (Boggy Creek), Gray Back Dev. Co. 3 50
Waggoner-DD, Phillips Pet. Co. 2 70
Waggoner-NN, Phillips Pet. Co. 22 165
Waggoner-G, Shaw Oil Co. 5 185
Waggoner-G, Staley Wynne & Co. 4 125
Waggoner-O, Staley Wynne & Co. 1 .... dry
Waggoner-J, Waggoner Ref. Co. 4 650
Waggoner-B, Barkley & Meadows 1 175
Waggoner-C, Barkley & Meadows 9 75
Waggoner-O, Consolidated Oil Co. 5 175
Waggoner, Davis Hart Oil Co. 1 .... dry
Waggoner-B, Easter Oil Co. 3 .... dry
Waggoner-B, Empire G. & F. Co. 16 130
Waggoner-C, Empire G. & F. Co. 7 160
Waggoner-W, Fain-McGaha Oil Corp. 11 125
Waggoner-W, Fain-McGaha Oil Corp. 13 300
Waggoner-AA, Fain-McGaha Oil Corp. 4 .... dry
Waggoner-AA, Fain-McGaha Oil Corp. 5 .... dry
Waggoner-DD, Fain-McGaha Oil Corp. 3 .... dry
Waggoner (Boggy Creek), Gray Back Dev. Co. 4 140
Waggoner-B, King Royalty Co. 2 175
Waggoner-G, Kolp 7 .... dry
Waggoner-B, Lewis Prod. Co. 2 220
Waggoner-DD, Phillips Pet. Co. 3 55
Waggoner-B, Richfield Oil Co. 1 .... dry
Waggoner-G, Shaw Oil Co. 6 236
Waggoner, Tulsa Oil Co. 1 .... dry
Waggoner, Wichison Oil Corp. 1 .... dry
Waggoner-C, Bradstreet Co. 1 175
Waggoner-O, Consolidated Oil Co. 4 135
Waggoner, Dixie Oil Co. 1 110
Waggoner-B, Empire Gas & Fuel Co. 15 105
Waggoner-W, Fain-McGaha Oil Corp. 9 175
Waggoner-Y, Fain-McGaha Oil Corp. 4 .. dry
Waggoner-A, Knight 4 110
Waggoner-F, Knight 2 100
Waggoner-U, Phillips Pet. Co. 4 84
Waggoner-OO, Phillips Pet. Co. 6 .... dry
Waggoner-B, Prairie O. & G. Co. 9 .... dry
Waggoner-F, Robertson et al 4 75
Waggoner, Simms Pet. Co. 10 .... dry
Waggoner-A, Simpson Fell Oil Co. 1 213
Waggoner-G, Staley Wynne & Co. 7 30
Waggoner-J, Waggoner Ref. Co. 3 175

Completions 61
Production 6533
Dry holes 16

YOUNG COUNTY

Edwards, Bratcher 9 10
Barrett, Carpenter 1 20
Morrison, Continental & Burton 1 .... dry
Cardwell, Dixon et al 1 .... dry
Langston, Kleiner et al 29 70
Langston, Kleiner et al 30 60
Gillmore, Robertson Drilling Co. 6 7
Gillmore, Robertson Drilling Co. 7 .... dry
Blackman, Steed & Gaus 1 .... dry
Boone, Strahan 1 .... dry
Calvin, Wise & Jackson 9 5
Prideaux, Wise & Jackson 1 .... dry
Graham, Canyon Oil & Gas Co. 1 10
Mathews, Bradstreet 2 42
Petty, The Texas Company 2 .... dry
Stovall, Stovall 12 6000
Hunt, Boller et al 1 .... dry
Graham, Booth et al 4 .... dry
Cullers, Bridwell & Clark 3 .... dry
Langston, Kleiner et al 31 10
Carpenter, Parks et al 1 80
Whitt, Perkins & Butler 2 15
Cullers, Southern & Gray 1 .... dry
Brown, Stafford 1 60
McBrayer, Scott & Nance 1 .... dry
Hunt, Boller et al 2 15
Self, Brihill & Bradstreet Co. 1 .... dry
Owen, Hawkins 3 .... dry
Carpenter, Parks et al 2 110
Haygood, Republic Prod. Co. 3 .... dry
Loftin, Trinity Oil Co. 1 .... dry

Completions 31
Prduction 6514
Dry holes 16

SOUTHWEST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Mirando	20	915	7	5	8	40	48
Yost	3	125	1	0	1	0	1
Joe Bruner	42	8,925	8	1	4	36	40
Dale	1	10	0	0	0	0	0
Luling	1	20	0	0	0	0	0
Refugio	8	1,461	1	2	4	21	25
Miscellaneous	47	0	44	3	14	103	117
Total July	122	11,456	61	11	31	200	231
Total June	74	14,576	27	8	34	197	231
Difference	48	3,120	34	3	3	3	0

WELLS COMPLETED

SCHOOLFIELD & O'BYRNE FIELD—DUVAL

Hahl, S. & O. Oil 4 150
Hahl, Magnolia Petroleum 3 75
Moody, G. M. Partee 4 125

Hahl, S. & O. Oil 5 300
Moody, G. M. Partee 2 55

HUMBLE FIELD

Kohler, Humble Oil & Ref. 28 ..... gas
Kohler, Humble Oil & Ref. 29 10
Kohler, Humble Oil & Ref. 26 ..... abd
Kohler, Humble Oil & Ref. 25 ..... abd

DRISCOLL FIELD

Driscoll, Robert Driscoll 16 ..... gas

RANDADO FIELD—JIM HOGG

Leyendecker, T. J. Conway 2 ..... abd
M. S. Banks, Magnolia Petroleum 42.. abd

CAROLINA-TEXAS FIELD—WEBB

Webster, George S. Marshall ..... gas
Benavides, Carolina Texas O. & G. 7.. gas

BRUNI FIELD

Bruni, Trussell-Cezeaux-Putman 3 ... abd
Lopez, Magnolia Petroleum 1 ..... gas

Wildcats

Moglia, L. W. Nelson 1 ..... abd

STARR COUNTY

Guerra, The Texas Company 1 ..... abd

JENNINGS FIELD—ZAPATA

Hinnant, Trapshooter Reilly 4 150
Cuellar, O. W. Killam 14 50

Wells completed 20
Production 915
Dry 7
Gas 5
Gas production 161,000,000

YOST—BASTROP

Yost, The Texas Company 7 ..... abd
Yost, Atlantic Oil Prod. 7 75
Yost, Trapshooter Reilly 6 50

Wells completed 3
Dry 1
Production 125

DALE-CALDWELL

Moore, The Texas Company 6 10

JOE BRUNER

Tiller, Humble Oil & Ref. 3 100
Dye, Humble Oil & Ref. 2 400
Tiller, Humble Oil & Ref. D-1 200
Johnson, Humble Oil & Ref. A-3 400
Hinds, Humble Oil & Ref. 3 75
Briscoe, Humble Oil & Ref. B-1 125
Briscoe, Humble Oil & Ref. A-3 50
Dye, Shell Petroleum 2 100
Merriweather, The Texas Company 9... 60
Wilson, Lutex Oil, Inc., 6 100
Northcut, Gulf Production 6 800
Moore, Forest Oil Co. 1 ..... gas
Northcut, Cranfill & Reynolds 3 100
Briscoe, Humble Oil & Ref. B-2 150
Briscoe, Humble Oil & Ref. A-4 200
Smith, Humble Oil & Ref. A-2 300
Smith, Gulf Production 7 ..... abd
Hanson, Hill and others 1 ..... abd
Malone, Morgan-Duke 2 ..... abd
C. C. Land, Swearingen, trustee 1 .... abd
Malone, Shell Petroleum 6 ..... abd
Beversdorff, Turman & Brown 1 .... abd
Carter, Luling Oil & Gas 1 ..... abd
Smith, Shell Petroleum 1 120
Tiller, Humble-Luling Oil & Gas 4.... 1000
Hinds, Humble-Luling Oil & Gas 5 ... 100
Hinds, Humble-Luling Oil & Gas 4 ... 500
Dye, Humble-Luling Oil & Gas 3 125
Gray, Humble-Luling Oil & Gas C-3 ... 175
Hanson, Humble Oil & Ref. 5 75
Smith, Humble Oil & Ref. C-5 300
Smith, Humble Oil & Ref. B-4 200
Smith, Humble Oil & Ref. A-3 150
Northcut, Humble Oil & Ref. A-4 150
Johnson, Humble Oil & Ref. B-3 150
Briscoe, Humble Oil & Ref. 2 800
Northcut, Humble Oil & Ref. 2 ..... abd
Tiller, Humble-Luling Oil & Gas 5 ... 700
Dye, Humble-Luling Oil & Gas 4 775
Hanson, Humble Oil & Ref. 6 50
Gray, Humble Oil & Ref. B-1 125
Gray, Humble Oil & Ref. B-3 150

Wells completed 42
Dry 8
Production 8925
Gas 1
Gas production 3,765,000

LULING FIELD

Lochman, Magnolia Petroleum 2 20

REFUGIO—REFUGIO

Rooke-Houston Oil Co. 6 ..... gas
Shelly, Mission Drilling 1 500
Adkins, Houston Gulf Gas 4 ..... abd
Powers, Mission Drilling 1 ..... abd
Rooke, Houston Oil B-1 ..... abd
Rooke, Houston Oil F-1 ..... abd
Ryals, Karona Oil Co. 1 ..... gas
Rea, Sun Oil Co. 1 1086
Huddleston, Mission Drilling 1 580
Heard, Houston Oil Co. 7 25

Wells completed 10
Dry 4
Production 2191
Gas 2
Gas production 125,000,000

MISCELLANEOUS

BASTROP COUNTY

Haywood, Humble Oil & Ref. A-1 .... abd

BEXAR COUNTY

Halff, J. Morgan Russell 1 ..... abd
Wolfsohl, Indian Creek O. & G. 1 ... abd
McConnell, American Central O. & G. 4. abd
Kennon, W. H. Kennon 2 ..... abd
Cohen, Medio Oil Co. 9 ..... abd
Engelmann, B. L. Raborn 1 ..... abd

BLANCO COUNTY

Glasscock, Robert Rodson 1 ..... abd
——, W. W. Rains and others 1 ... abd
Albert Moursund 1 ..... abd
Beauchamp, Hohenstein & Burtner 1 . abd
Massey, C. W. Bates 1 ..... abd

BROOKS COUNTY

Salado, A. W. Dinn 1 ..... abd
Ramas, A. W. Dinn 1 ..... abd
Riley Allen, Milam Drilling Co. 3 .... abd

CALDWELL COUNTY

Hill, Russell 1 ..... abd

COLORADO COUNTY

Brandt, National Oil Co. 1 ..... abd

GUADALUPE COUNTY

Adams, Magnolia Petroleum 1 ..... abd
Notle, W. J. Walton 1 ..... abd
Woehler, Eugene Sights 1 ..... abd
Gonzales, Mid-Kansas Oil & Gas 1 ... abd
Gib Springs, Miller Brothers 1..... abd
Haensel, Grayburg Oil Co. 1 ..... abd
Weinaug, L. W. Conner 1 ..... abd

GONZALES COUNTY

Billings, Alexander & Smith 1 ..... abd

GOLIAD COUNTY

Taylor, Humble Oil & Ref. 1 ..... abd

JACKSON COUNTY

Lawrence, The Texas Company 1 ..... abd

KERR COUNTY

Schreiner, McMan Oil & Gas 2 ..... abd

KENDALL COUNTY

McCrocklin, C. W. Gould 1 ..... abd

KENNEY COUNTY

Clamp, Mardon Oil Co. 1 ..... abd

LIVE OAK COUNTY

Parr, Houston Oil Co. 1 ..... gas
Sawyer, Dr. Frank Lynch 1 ..... gas

MILAM COUNTY

Moore, H. E. Elliott 1 ..... abd
Gilchrist, E. L. Chapman 1 ..... abd
Dornhoefer, Groneman Brothers 1 ... abd

MEDINA COUNTY

Sub. Farms, Pearson Oil 1 ..... gas
Sub. Farms, Zigzag Oil Co. 1 ..... abd
Sub. Farms, Pearson Oil Co. 2 ..... abd
Adams, Donaldson Oil Co. 2 ..... abd
Bendele, Rawdon & Hughes 1 ..... abd
Bendele, Rawdon & Hughes 2 ..... abd
Haeglin, Rawdon & Hughes 1 ..... abd
Mott, Lynch and others 1 ..... abd
Reinhart, W. W. Woodworth 1 ..... abd

NUECES COUNTY

The Texas Company fee, Spencer & Rhodes 1 ..... abd

SAN PATRICIO COUNTY

Miller ranch, Magnolia Petroleum 1 ... abd
Whitworth, George B. Pickett 1 ..... abd

VICTORIA COUNTY

Kohutek, Humble Oil & Ref. A-1 ..... abd
Knape, Humble Oil & Ref. 1 ..... abd
Oliver, Humble Oil & Ref. 1 ..... abd

ZAVALA COUNTY

Ike Pryor, Witherspoon Oil Co. 1 ..... abd

Wells completed 47
Dry 44
Gas 3
Gas production 43,000,000

TEXAS PANHANDLE

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	2	1,125	1	1
Gray	27	21,653	3	1
Hutchinson	2	37	..	1
Wheeler	5	65	..	4
Total July	42	22,880	4	7
Total June	44	40,849	2	12
Difference	2	17,969	2	5

Summary of Rigs and Wells Drilling

County—	Rigs	Wells Drlg.	Wells S.D.	Wells Ttl.
Carson	3	20	5	28
Gray	29	93	9	131
Hutchinson	5	26	3	34
Moore	2	11	1	14
Wheeler	7	10	5	22
Miscellaneous	2	11	9	22
Total July	48	171	32	251
Total June	75	137	32	244
Difference	27	34	..	7

WELLS COMPLETED

CARSON COUNTY

McConnell, Champlin Ref. Co. 3 70
Ware et al, Ware et al 1 ..... dry
Noel, Gulf Production Co. 6 250
Block, Gulf Production Co. 1 265
Burnett, Empire G. & F. Co. 16 ..... gas
Mag. Pet. Co. Fee-A, Empire G. & F. Co. 5 225
Cooper, Midwest Expl. Co. 1 305
Barnard, Morris et al 1 10

Completions 8
Production 1125
Dry holes 1
Gas wells 1
Gas production 22,000

GRAY COUNTY

Davis, Barnsdall Oil Co. 1 ..... dry
Clayton, Shamrock Oil Co. 1 800
Bowers, Magnolia Pet. Co. 3 100
Bowers, The Texas Company 6 196
Smith, Washoma-Danciger 2 185
Jackson, Gulf Production Co. 1 627
Morse, Phillips Pet. Co. 1 123
McLarty-Lester, The Texas Company 5.. 189
Saunders, The Texas Company 6 ..... dry
Heithholt, A. R. Anderson et al 1 150
Purviance et al, British American Oil Co. 1 65
Cook-Faulkner, Operators Oil Co. 2 4320
Palmer, Phillips Pet. Co. 2 1320
Bruce Bull, The Texas Company 2 920
Shell-Shaw, Danciger Oil & Ref. Co. 2.. 2100
Shaw, The Texas Company 2 676
Cook-Faulkner, Champlin Ref. Co. 1 240
McConnell, Cockrell-McIlroy 2 400
Brown, Empire G. & F. Co. 1 ..... gas
Pinkey-Brown, Marland Prod. Co. 4 ... 1392
Cook-Faulkner, Operators Oil Co. 3 ... 1798
Palmer, Phillips Pet. Co. 3 5200
Morse, Danciger Oil & Ref. Co. 4 42
Chapman, Scott Drlg. Co. 1 75
Finley-Brown, Marland Prod. Co. 2 525
Bowers, Magnolia Pet. Co. 5 210
Combs-Worley, Wilcox-Pampa Oil Co. 7 dry

Completions 27
Production 21,653
Dry holes 3
Gas wells 1
Gas production 9,000,000

HUTCHINSON COUNTY

Sanford (Glass), Phillips Pet. Co. 1.... 37
Cal Merchant, Prairie O. & G. Co. 2... gas

Completions 2
Production 37
Gas wells 1
Gas production 62,000,000

WHEELER COUNTY

Griswold, Martin & DeBois 1 ..... gas
Laycock et al, Lela O. & G. Co. 6 ... 65
Gooch, Upham Gas Co. 2 ..... gas
Mengers, Upham Gas Co. 1 ..... gas
Trostle, Magnolia Pet. Co. 1 ..... gas

Completions 5
Production 65
Gas wells 4
Gas production 112,500,000

GULF COAST FIELDS

Summary of Field Operations

	Comp.	Prod.	Abd.	Gas	Rigs	Drg.	Ttl.
Barbers Hill .	4	10,200	0	0	1	17	18
Batson	3	10	2	0	0	4	4
Big Creek ...	2	20	1	0	0	4	4
Blue Ridge ..	2	1,200	0	0	0	6	6
Boling	5	50	4	0	0	4	4
Clay Creek ..	2	350	0	0	0	2	2
Damon Mound	0	0	0	0	0	3	3
DeWalt	6	3,242	1	0	1	7	8
Goose Creek .	3	275	0	0	1	2	3
High Island .	1	1,800	0	0	0	2	2
Hull	11	1,638	2	0	0	5	5
Humble	7	2,540	4	0	0	14	14
Liberty	5	1,550	3	0	1	6	7
Markham	2	0	2	0	0	0	0
Nash	0	0	0	0	0	1	1
North Dayton	0	0	0	0	0	2	2
Orange	3	107	0	0	0	3	3
Orchard	0	0	0	0	0	1	1
Pierce Junc'n	7	6,310	0	0	0	15	15
Raccoon Bend	9	1,636	2	2	2	19	21
Saratoga	2	62	0	0	0	2	2
Sour Lake ...	3	100	1	0	0	2	2
Spindletop ..	10	5,205	1	0	1	14	15
West Columbia	0	0	0	0	1	3	4
Miscellaneous	17	38	15	1	3	39	42
Total July .104		36,333	38	3	11	177	188
Total June..119		39,653	42	1	34	159	193
Difference . 5		3,320	4	2	23	18	5

WELLS COMPLETED
TEXAS

BARBERS HILL—CHAMBERS COUNTY

Hamman, Mills Bennett Production Co. 2 3,400
Smith, Mills Bennett Production Co. 1 300
McKinney, Republic Production Co. 1.. 5,900
Schilling, Talbert & Markle 1 600

Wells completed 4
Production 10,200
Abandoned or gas 0

BATSON—HARDIN COUNTY

Producers, Ada Belle Oil Co. 127..... abd
Knight Fee, Gulf Production Co. 18.... abd
Milholm, Hill & Dowell 98 10

Wells completed 3
Production 10
Abandoned 2

BIG CREEK—FORT BEND COUNTY

Davis, Gulf Production Co. 37 ..... abd
Hausler, Navarro Oil Co. 3 20

Wells completed 2
Production 20
Abandoned 1

BLUE RIDGE—FORT BEND COUNTY

Blakely, So. Texas Petroleum Co. 1.... 200
Luscher, Gulf Production Co. 15 1,000

Wells completed 2
Production 1,200
Abandoned or gas 0

BOLING—WHARTON AND FORT BEND

Farmer (E. C)., Sun Oil Co. 6 ..... abd
Farmer (E. C.), Sun Oil Co. 7 ..... abd
Bushnell, The Texas Company 1 50
Hill, Union Sulphur Co. 3 ..... abd
Hill, Union Sulphur Co. 4 ..... abd

Wells completed 5
Production 50
Abandoned 4

CLAY CREEK—WASHINGTON COUNTY

Grote (G. F.), Sun Oil Co. 7 300
Carraway, Sun Oil Co. 2 50

Wells completed 2
Production 350

DEWALT—FORT BEND COUNTY

Deatherage, Humble Oil & Refining Co. 1-B ..... abd
Camp, Humble Oil & Refining Co. 1 ... 893
Nelson, Humble Oil & Refining Co. 3.. 700
Nelson, Humble Oil & Refining Co. 4.. 900
Sugarland, Humble Oil & Refining Co. 8 377

Wells completed 6
Production 3,242
Abandoned 1

GOOSE CREEK—HARRIS COUNTY

Gillette, Russell Farrell 5 75
Scott, Lee & Scott 2 125
Scorrega, W. C. Turnbow 6 75

Wells completed 3
Production 275

HIGH ISLAND—GALVESTON COUNTY

Smith, Gulf Production Co. 9 1,800

HULL—LIBERTY COUNTY

Wilson, Daisetta Oil Co. 1 3
Barngrover, Empire Gas & Fuel Co. 21.. 50
Phoenix, Gulf Production Co. 93 600
Hoosks-Spell, Humble Oil & Ref. Co. 4 abd
Dolbear, Republic Production Co. 24 .. 275
Dolbear, Republic Production Co. 61.... 140
Dolbear, Republic Production Co. 107... 200
Dolbear, Republic Production Co. 112.. 30
Dolbear, Republic Production Co. 139.. 300
Taylor, Republic Production Co. 1 .... abd
Carr, Sun Oil Co. 10 40

Wells completed 11
Production 1,638
Abandoned 2

HUMBLE—HARRIS COUNTY

Williams, Humble Oil & Refining Co. 1 abd
Bailey, Harvey Smith et al 1 ..... abd
Morris, So. Texas Petroleum Co. 5.... 1,840
Morris, So. Texas Petroleum Co. 6.... 600
Burt, So. Texas Petroleum Co. 1 ..... abd
Landslide, The Texas Company 262.... 100
Wheeler & Pickens, The Texas Company 21 ..... abd

Wells completed 7
Production 2,540
Abandoned 4

LIBERTY—LIBERTY COUNTY

Pickett, Pierce & Rogers 1 ..... abd
Staiti, The Texas Company 21 ..... abd
Green, The Texas Company 5 1,250
Bartlett, Vacuum Oil Co. 11 ..... abd
Mitchell, Yount Lee Oil Co. 17 300

Wells completed 5
Production 1,550
Abandoned 3

MARKHAM—MATAGORDA COUNTY

Kountze, Rycade Oil Corp. & Humble Oil & Refg. Co. 6-A ..... abd
Myers, West Production Co. 1 ..... abd

Wells completed 2
Production 0
Abandoned 2

ORANGE-ORANGE COUNTY

Berwick, Orange Petroleum Co. 3 25
Carbello, Rex Petroleum Co. 2-B 7
Jackson, Supreme Oil Co. 3 75

Wells completed 3
Production 107
Abandoned 0

PIERCE JUNCTION—HARRIS COUNTY

Cain, Gulf Production Co. 8.....2,000
Taylor, Gulf Production Co. 29 10
Herman Estate, Moody Corp. 1 1,400
Herman Estate, Pure Oil Co. 1 310
Settegast, Rio Bravo Oil Co. 15-A 2,200
Fitzsimmons, T. G. Shaw & Texas Exploration Co. 2-B 40
Parson, Smith et al 1 350

Wells completed 7
Production 6,310
Abandoned 0

RACCOON BEND—AUSTIN COUNTY

Hardy, Humble Oil & Refining Co.-Valley Oil Corp. ..... abd
Dietrichs, Humble & Valley 3 370
Mahnke, Humble & Valley 1 ..... gas
Mitchell, Humble & Valley 1-A ..... abd
Mitchell, Humble & Valley 1-B 230
Bracey, Humble & Valley 2-A 500
Koehn, Humble & Valley 1-B ..... gas
Buchanan, Humble & Valley 1 36
Saunders, Humble & Valley 3 500

Wells completed 5
Production 1,636
Abandoned 2
Gas 2
Gas production 14,500,000

REFUGIO—REFUGIO COUNTY

Ryals, Houston Gulf Gas Co. 4 200
Adkins, Houston Gulf Gas Co. 3 ..... abd
Pratt-Hewitt-Rooke, Houston Oil Co. 6 gas
Fannie Heard, Houston Oil Co. 12.... 200
Rooke, Houston Oil Co. 1-F ..... gas
Huddleston, Mission Drilling Co. 1 425
Shelly, Mission Drilling Co. 1 300
Claude Heard, Saxet Oil Co. 8 336

Wells completed 8
Production 1,461
Abandoned 1
Gas 2

SARATOGA—HARDIN COUNTY

C. Rio Bravo Oil Co. 37 5
Hooks, Weldon Oil Co. 19 54

Wells completed 2
Production 62

SOUR LAKE—HARDIN COUNTY

Thomson, Gulf Production Co. 3..... abd
Jackson, Humble Oil & Refining Co. 2-C 75
Hardin, Lake View Oil Co. 60 25

Wells completed 3
Production 100
Abandoned 1

SPINDLETOP—JEFFERSON COUNTY

Roche, Gulf Production Co. 8 135
McFaddin, Unity Petroleum Co. 92 10
Gladys City, Yount Lee Oil Co. 5 710
Gladys City, Yount Lee Oil Co. 32 1,200
Gladys City, Yount Lee Oil Co. 91 750
Gladys City, Yount Lee Oil Co. 93..... 240
McFaddin, Yount Lee Oil Co. 94 240
McFaddin, Yount Lee Oil Co. 105 720
McFaddin, Yount Lee Oil Co. 106 1,000
Fee, Yount Lee Oil Co. 4 ..... abd

Wells completed 10
Production 5,205
Abandoned 1

MISCELLANEOUS TEXAS

AUSTIN COUNTY

Brenham-Sundenheussen, Golden Rule Oil Co. 10 35
Brenham-Hess, Lynn Oil Co. 1 3
Mewis, Flanigan & Mewis 1 ..... abd

BRAZORIA COUNTY

Allen-Allen, Shell Petroleum Corp. 4.. abd
Bryan, Humphreys Corp. 1 ..... abd

COLORADO COUNTY

Hennecki, Shell Petroleum Corp. 1 .... abd
Tait, Humble Oil & Refining Co. 1 .... abd

HARDIN COUNTY

Nona Mills, Gulf Coastal Oil Co. 1 .... abd

HARRIS COUNTY

Hockley-Warren, Humble Oil & Refining Co. 5 ..... abd
Davis, Little York Oil Co. 1 ..... abd

JACKSON COUNTY

Lawrence, The Texas Company 1 .... abd
Lea, Wright Brothers 2 ..... gas

JASPER COUNTY

Boykin, Great Lakes Oil Co. 6 ..... abd
Boykin, Mark Kleedon 5 ..... abd

TYLER COUNTY

Caswell, Rockland Oil Co. 1 ..... abd

WALLER COUNTY

Feagin, Union Exploration Co. 1 ..... abd

WASHINGTON COUNTY
Searcy, Cullen et al 1 ..... abd

Wells completed 17
Production 38
Abandoned 15
Gas 1
Gas production 30,000,000

NORTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Bienville	0	0	0	0	0	1	1
Bossier	2	0	0	2	2	8	10
Caddo	15	1,513	5	0	14	33	47
Catahoula	0	0	0	0	0	1	1
Claiborne	0	0	0	0	1	5	6
DeSoto	1	0	1	0	1	7	8
Franklin	0	0	0	0	0	1	1
Grant	1	0	1	0	0	0	0
Jackson	0	0	0	0	0	1	1
LaSalle	5	360	1	0	3	5	8
Lincoln	0	0	0	0	0	1	1
Morehouse	3	0	0	3	7	5	12
Natchitoches	0	0	0	0	0	2	2
Ouachita	8	0	1	7	10	14	24
Red River	0	0	0	0	2	4	6
Richland	10	0	3	7	11	10	29
Sabine	1	0	1	0	0	5	5
Union	7	0	1	6	1	7	8
Webster	2	0	1	1	2	11	13
West Carroll	0	0	0	0	1	0	1
Winn	1	200	0	0	1	1	2
Total July	56	2,073	15	26	56	122	178
Total June	53	3,991	10	28	52	119	171
Difference	3	1,918	5	2	4	3	7

*Gas production: Bossier, 24,843,000; Morehouse, 56,482,000; Ouachita, 88,452,000; Richland, 207,264,000; Union, 67,000,000; Webster, 1,500,000; total, 445,541,000 feet.

WELLS COMPLETED
BOSSIER PARISH
14-17-12 Schnitt, J. F. Palmer 1 ..... gas
34-16-12 Whitehurst, Woodley Pet. Co. 6 gas

Gas production 24,843,000

CADDO PARISH
23-22-15 Levee Board, Bayou State Oil Corp. 17 30
33-21-16 Fee, W. D. Chew 1-B 15
13-21-15 Dillon, Dixie Oil Co. 99..... dry
21-21-15 Slattery, Dixie Oil Co. 3-B.... dry
21-21-15 Wells, Dixie Oil Co. 3-B..... dry
17-19-14 Hunter, Gold & Sklar 1..... 700
18-19-14 Oden, Gulf Ref. Co. 3..... 20
18-19-14 Oden, Gulf Ref. Co. 4..... 528
17-19-14 Hunter, Ohio Oil Co. 1..... 80
8-19-14 Hunter, Palmer Corp. 1..... 40
8-19-14 Hunter, Ray-Dawes Drilling Co. 1 ..... dry
32-21-15 Guy et al, Shreveport Oil Corp. 3 25
8-19-14 Henderson, Standard Oil Co. 2. 25
17-19-14 Hunter, Standard Oil Co. 5.... 50
18-19-14 Oden, Standard Oil Co. 2..... dry

Wells completed 15
Production 1513
Dry 5

DESOTO PARISH
6-12-11 Nabors, D. Thompson 1 ..... dry
GRANT PARISH
18- 9-1e Fee, L. C. Swope 7..... dry
LASALLE PARISH
19-10-2e Urania, Arkansas Natural Gas Corp. 13-M ..... dry
23-10-1e Tullos, O. W. Clark 7..... 50
23-10-1e Tullos, O. W. Clark 8..... 150
25-10-1e Tremont, Louisiana Oil Refining Corp. 39-B 120
17- 7-2e L. & A., Tunica Petroleum Co. 47 10

Wells completed 5
Production 360
Dry 1
MOREHOUSE PARISH
15-20-4 Flemming, Interstate Natural Gas Co. 2 ..... gas
2-20-4 Tensas, Southern Carbon Co. 10. gas
21-20-5 Fee, LaDel Prod. Co. 48..... gas

Gas production 56,482,000
OUACHITA PARISH
7-18-5 Burke, Mack & Pipes 1..... gas
7-18-5 A. White, Mack & Pipes 1..... gas
1-19-4 Central Bank, Magnolia Petroleum Co. 1 ..... dry
2-18-3 Fee 401, Magnolia Petroleum 1. gas
40-20-4 Smith, Ouachita Natural Gas Co. 10 ..... gas
40-20-4 Smith, Ouachita Natural Gas Co. 11 ..... gas
2-18-4 Rea & Green, Sandidge & Sackett 2 ..... gas
23-19-4 Fee, Southern Carbon Co. 53... gas

Wells completed 8
Gas 7
Dry 1
Gas production 88,452,000
RICHLAND PARISH
33-16-6 McCoy, W. C. Feazel 1..... gas
16-16-6 W. T. Sartor, O. E. Hodge 1... gas
28-17-6 Standard Oil Co., Hope Producing Co. 1 ..... gas
20-17-6 Boykin, Northern Louisiana Natural Gas Co. 3 (cratered).... dry
16-17-6 Hardwick, Palmer Corp. 1..... gas
22-17-6 Jones, Palmer Corp. 1..... gas
11-17-6 Miles, Palmer Corp. 1..... dry
21-17-6 Rhymes, Palmer Corp. 4..... gas
21-17-6 Whitten, Palmer Corp. 1..... gas
5-15-6 Tegola, Southern Carbon Co. 1-B dry

Wells completed 16
Gas 7
Dry 3
Gas production 207,264,000
SABINE PARISH
16-7-12 Bowman-Hicks, W. J. Garnier, trustee 1 ..... dry
UNION PARISH
16-20-4 Barr, Friend & Bahan 1..... gas
36-21-3 Spencer, E. S. Hall 2..... gas
30-20-4 Fee, Imperial Oil & Gas Products Co. 1-A ..... gas
23-20-3 Parks, Interstate Natural Gas Co. 1 ..... gas
14-21-3 Hollis, Natural Gas Producing Co. 1 ..... gas
21-21-3 Downey, Palmer Corp. 2..... gas
9-21-2w Fuller, The Texas Co. 1..... dry

Wells completed 7
Gas 6
Dry 1
Gas production 67,000,000
WEBSTER PARISH
1-22-11 Denman, Magnolia Pet. Co. 1. dry
27-21-10 Tillman, Palmer Corp. 5..... gas

Gas production 1,500,000
WINN PARISH
26-10-1e Harper, Gardner, Harter & Brown 12 200

SOUTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Anse La Butte	0	0	0	0	0	1	1
Bayou Bouillon	1	73	0	0	0	2	2
Edgerly	0	0	0	0	0	2	2
Jennings	5	345	1	0	0	3	3
Hackberry	0	0	0	0	0	7	7
Lockport	0	0	0	0	0	6	6
Sorrento	0	0	0	0	0	1	1
Starks	0	0	0	0	0	2	2
Sulphur	1	1,000	0	0	0	3	3
Sweet Lake	0	0	0	0	0	1	1
Vinton	2	1,400	0	0	0	3	3
Miscellaneous	7	824	6	0	8	14	22
Total July	16	3,642	7	0	8	45	53
Total June	28	7,214	16	1	8	36	44
Difference	12	3,572	9	1	0	9	9
Total Gulf Coast July	120	39,975	45	3	19	222	241
Total June	147	46,867	58	2	42	195	237
Difference	27	6,892	13	1	23	27	4

WELLS COMPLETED
BAYOU BOUILLON—ST. MARTIN PARISH
Bouillon Fee, Rycade Oil Corp. 4 73
JENNINGS—ACADIA PARISH
Conklin, Cline, Smith & Cline 9 ..... abd
Syndicate Fee, Port City Oil Co. 11.... 70
Crusel, Ratcliff Oil Co. 2 25
Jennings-Heywood, Reliable Oil Co. 2.. 200
Rawson-Haber, Reliable Oil Co. 2 50

Wells completed 5
Production 345
Abandoned 1
SULPHUR-CALCASIEU PARISH
Fee, Union Sulphur Co. 747 1,000
VINTON—CALCASIEU PARISH
Matilda Gray, Vinton Petroleum Co. 2..1,250
G. & N. Gray, Gulf Refining Co. 66.... 150

Wells completed 2
Production 1,400
MISCELLANEOUS LOUISIANA
ASCENSION PARISH
Robert, Burnside Oil Co. 2 ..... abd
LAFOURCHE PARISH
Thibodaux-Stark, Gulf Refining Co. 12 abd
Thibodaux-Stark, Gulf Refining Co. 15 abd
Thibodaux-Stark, Gulf Refining Co. 17 abd
ST. LANDRY PARISH
Point Barre-Gaudet, Gulf Refining Co. 1 ..... abd
Four Isle-L. L. & E. Co., The Texas Company 1 ..... abd
Lake Pelto-Lake Pelto, The Texas Company 1-B 824

Wells completed 7
Production 824
Abandoned 6

EAST CENTRAL TEXAS

Summary of Field Operations

	Comp.	Prod.	Abd.	Gas	Rigs	Drg.	Ttl.
Anderson	4	300	3	0	1	5	6
Burleson	0	0	0	0	0	1	1
Cherokee	1	0	1	0	0	0	0
Falls	1	0	1	0	0	1	1
Fannin	0	0	0	0	0	2	2
Freestone	0	0	0	0	0	1	1
Grimes	0	0	0	0	0	1	1
Hill	2	0	2	0	0	3	3
Leon	0	0	0	0	0	1	1
Limestone	1	0	1	0	0	2	2
McLennan	1	0	1	0	0	1	1
Milam	3	0	3	0	0	5	5
Navarro	1	0	1	0	0	2	2
Robertson	0	0	0	0	0	1	1
Rusk	0	0	0	0	0	3	3
Upshur	0	0	0	0	0	2	2
Van Zandt	1	0	1	0	0	1	1
Total July	15	300	14	0	1	32	32
Total June	16	463	14	0	2	30	32
Difference	1	163	0	0	1	2	1

WELLS COMPLETED
ANDERSON COUNTY
Boggy Creek-Beard, Humble Oil & Refining Co. 1 ..... abd
Boggy Creek-Elliott & Clark, Humble Oil & Refg. Co. 3-A ..... abd
Boggy-Creek-Holloway, Humble Oil & Refg. Co. 3 300
Posey Saline-Southern Pine, Humble Oil & Refg. Co. 3-A ..... abd

Wells completed 4
Production 300
Abandoned 2
CHEROKEE COUNTY
Asylum, State of Texas 1 ..... abd
FALLS COUNTY
Flowers, Caruth & Stewart 2 ..... abd
HILL COUNTY
Reynolds, Fentress et al 1 ..... abd
Jones, Harper & Starkey 1 ..... abd

Wells completed 2
Abandoned 2
LIMESTONE COUNTY
Sullivan, Fentress et al 1 ..... abd
MCLENNAN COUNTY
Johnson, Bosque Oil & Gas Co. 1 .... abd
MILAM COUNTY
Gilchrist, Chapman et al 1 ..... abd
Moore, Elliott et al 1 ..... abd
Dornheifer, Goreman Brothers 1 ..... abd

Wells completed 3
Abandoned 3
NAVARRO COUNTY
Finch, Riverland Oil Co. and Tidal Oil Co. 1 ..... abd
VAN ZANDT COUNTY
Smith, Pure Oil Co. 1 ..... abd

ARKANSAS

Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Ashley	1	0	1	0	0	0	0
Calhoun	0	0	0	0	1	1	2
Clark	0	0	0	0	0	1	1
Columbia	1	0	1	0	0	3	3
Faulkner	0	0	0	0	0	1	1
Grant	0	0	0	0	0	1	1
Lincoln	0	0	0	0	0	1	1
Little River	0	0	0	0	0	1	1
Logan	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Nevada	0	0	0	0	0	2	2
Ouachita	2	1,290	0	0	3	12	15
Union	4	0	3	1	7	16	23
Washington	0	0	0	0	0	2	2
White	0	0	0	0	0	1	1
Total July	8	1,290	5	1	11	44	55
Total June	21	1,631	12	2	9	40	49
Difference	13	341	7	1	2	4	6

*Gas production 18,802,000 feet.

WELLS COMPLETED
ASHLEY COUNTY
20-15-7 Young, Atlantic Oil Producing Co. et al 1 ..... dry
COLUMBIA COUNTY
5-17-18 Jones, T. J. Bush, trustee, 1... dry
OUACHITA COUNTY
25-15-18 Wilson, McDonald Bros. 2-A.. 150
25-15-18 Wilson, McDonald Bros. 3-B..1140
UNION COUNTY
7-17-13 El Dorado Realty Co., Bailey & Trimble 1 ..... dry
30-17-14 Gaddy, Gulf Ref. Co. 2..... gas
4-18-13 Cargile, Johnson-Gummer Oil Co. 1 ..... dry
7-17-13 Lynn, Rushing and others 1... dry

Gas production 18,802,000

EAST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Bowie	0	0	0	0	0	1	1
Camp	0	0	0	0	0	1	1
Harrison	3	0	0	3	0	1	1
Marion	0	0	0	0	0	1	1
Panola	3	0	1	2	2	8	10
Red River	1	0	1	0	0	3	3
Shelby	0	0	0	0	0	2	2
Total July	7	0	2	5	2	17	19
Total June	8	0	6	2	2	20	22
Difference	1	0	4	3	0	3	3

*Gas production: Harrison, 4,000,000; Panola, 1,076,000; total, 5,076,000 feet.

HARRISON COUNTY
W. R. Anderson Sur.: Vaughn, Eureka Natural Gas Co., 4 ..... gas
James Short Sur.: Furrh, C. H. Lyons, 6 gas
E. M. Jenkins Sur.: Saye, C. H. Lyons, 1 gas

Gas production 4,000,000
PANOLA COUNTY
S. B. Lacy Sur.: Adams, The Texas Company 11-A ..... gas
S. B. Lacy Sur.: Adams, The Texas Company 12-A ..... gas
Jane Thorpe Sur.: Mays, D. Thomason 1-B ..... dry

Gas production 1,076,000
RED RIVER COUNTY
E. M. Dean Sur.: Randolph, Johnson Petroleum Co. 2 ..... dry

MISSISSIPPI

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Alcorn	0	0	0	0	0	1	1
Chickasaw	0	0	0	0	0	1	1
Claiborne	0	0	0	0	0	2	2
*Hinds	2	0	2	0	2	3	5
Humphreys	0	0	0	0	0	1	1
Lauderdale	0	0	0	0	2	1	3
Monroe	0	0	0	0	1	6	7
Warren	0	0	0	0	0	1	1
Webster	0	0	0	0	0	1	1
Yalobusha	0	0	0	0	0	1	1
Total July	2	0	2	0	5	18	23
Total June	2	0	2	0	7	18	25
Difference	0	0	0	0	2	0	2

*Derricks.

HINDS COUNTY
30- 6-4 Southern Christian Institute, Big Black Oil Co. 1 (drk.) ..... abd
36-16-5 Lewis, Edwards Oil Co. 4 (drk.) abd

ALABAMA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Choctaw	0	0	0	0	1	0	1
Houston	0	0	0	0	0	1	1
Lawrence	0	0	0	0	0	2	2
Lamar	0	0	0	0	0	1	1
Marion	0	0	0	0	1	0	1
Moran	0	0	0	0	0	1	1
Washington	0	0	0	0	0	3	3
Total July	0	0	0	0	2	8	10
Total June	0	0	0	0	1	8	9
Difference	0	0	0	0	1	0	1

WEST TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Fayette	0	0	0	0	1	0	1
Decatur	0	0	0	0	0	2	2
Total July	0	0	0	0	1	2	3
Total June	0	0	0	0	1	2	3
Difference	0	0	0	0	0	0	0

KENTUCKY-TENNESSEE

Kentucky

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Drg.	Ttl.
Warren	3	7	0	0	0	3	3
Allen	5	8	2	0	0	4	4
Barren	16	24	7	4	0	3	3
Ohio	80	4,109	22	3	3	93	96
Daviess	38	1,098	13	0	4	45	49
Hancock	1	30	0	0	1	4	5
McLean	0	0	0	0	1	4	5
Henderson	2	95	0	0	0	4	4
Webs.er	0	0	0	0	0	2	2
Hopkins	0	0	0	0	0	7	7
Muhlenburg	1	75	0	0	0	5	5
Butler	0	0	0	0	1	2	3
Breckenridge	2	12	0	0	1	1	2
Christian	0	0	0	0	3	3	6
Caldwell	0	0	0	0	0	1	1
Cumberland	0	0	0	0	0	2	2
Larue	4	0	4	0	0	1	1
Wayne	2	45	0	0	0	5	5
Powell	0	0	0	0	0	1	1
Estill	0	0	0	0	0	4	4
Morgan	1	0	1	0	0	0	0
Lee-Owsley	1	0	1	0	0	0	0
Wolfe	1	0	1	0	0	0	0
Johnson-Magoffin	0	0	0	0	3	0	3
Floyd	3	0	0	3	0	1	1
Clay	3	0	2	0	0	0	0
Knox	0	0	0	0	0	1	1
Total July	162	5,503	53	10	17	197	214
Total June	100	3,666	24	8	15	216	231
Difference	62	1,837	29	2	2	19	17

Tennessee

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Drg.	Ttl.
Clay	0	0	0	0	2	8	10
Jackson	0	0	0	0	0	2	2
Marshall	0	0	0	0	1	0	1
Decatur	0	0	0	0	0	2	2
Total July	0	0	0	0	3	12	15
Total June	0	0	0	0	3	12	15
Difference	0	0	0	0	0	0	0

WELLS COMPLETED
WARREN COUNTY
Bowling Green—Davenport No. 1, W. B. Cauble 5 2
W. D. Duncan, W. C. Eyl 5 1
Hobson hrs., Penn Homa Oil 20 4

Wells completed 3
Production 7
ALLEN COUNTY
Scottsville—I. S. Stovall, Pearson & Sturm 11 1
J. Morrison, Tracy Supply Co. 10.... 6
A. Welch No. 2, Allen Oil Corp. 11... 1
Supernor, Finch & Co. 10 ..... dry
Hood, Tapp & Co. 1 ..... dry

Wells completed 5
Production 8
Dry 2
BARREN COUNTY
Glasgow—Martin, R. B. Tyler ..... dry
M. Ellis, H. C. Smith Oil 3 2
Louis Nickols, Esslinger Oil 10 ..... dry
Larine Evans, R. B. Tyler 1 ..... gas
A. E. Mayfield, R. B. Tyler 1 ..... gas
Duff, Davis & Norris 1 ..... dry
Jim Bray, A. W. Ziegler 4 15
Unknown, Kidd & Richardson 1 .... dry
Widow Ellis, Norris & Sampson 1.... dry
Mansfield, Consolidated Oil 1 2
Mayfield hrs., J. W. Porter 2 3
Geo. Mayfield, J. W. Porter 1..... dry
Sarah Reed, J. H. Mann & Co. 1 .... dry
Mansfield, Consolidated Oil 3 1
Pedigo, R. B. Tyler 1 ..... gas
Boles, H. R. Norris 1 ..... gas

Wells completed 16
Production 24
Dry 7
Gas 4
OHIO COUNTY
Hartford—J. A. Kirk, Ohio Oil 7 200
W. B. Kelley, Ohio Oil 7 80
W. B. Howard, J. C. Ellis & Co. 4.... 12
Greer hrs., J. C. Ellis & Co. 3 2
Keith, J. C. Ellis & Co. 7 25
Keith, J. C. Ellis & Co. 8 25
N. J. Brown hrs., J. C. Ellis & Co. 2 dry
Ellis Bartlett, Hupp & Duff 10 ..... dry
Ellis Bartlett, Hupp & Duff 11..... 100
L. Trodgen, Hupp & Duff 9 150
L. Trodgen, Hupp & Duff 10 150
L. Trodgen, Hupp & Duff 11 200
L. Trodgen, Hupp & Duff 12 100
L. Trodgen, Hupp & Duff 13 150
L. Trodgen, Hupp & Duff 14 200
L. Trodgen, Hupp & Duff 15 200
L. Trodgen, north, C. E. Daugherty & Co. 5 40
L. Trodgen, north, C. E. Daugherty & Co. 6 100

L. Trodgen, north, C. E. Daugherty & Co. 7 150
Hewlett, C. E. Daugherty & Co. 3.... 2
Duke hrs., Snowden-McSweeney 8.... dry
Duke hrs, Snowden-McSweeney 9.... 200
Eliza Jewell, Victor Oil 1 ..... dry
Walker, Weir & Stewart 1 ..... dry
J. L. Stinnett, Rex-Pyramid Oil 9.... 120
Morgan, Rex-Pyramid 1 400
Morgan, Rex-Pyramid 2 250
T. R. Howard, Three C's Oil Co. 2.... 20
R. Westerfield, J. C. Ellis & Co. 1.... 10
W. R. Moseley, Woodward Oil 1 ..... dry
Ada Kelley, Snowden-McSweeney 8.... dry
P. A. Taylor, Raydue & Birkhead 4 .. dry
J. E. Hendrix, Ray Bigler & Co. 7.... 15
J. E. Hendrix, Ray Bigler & Co. 8.... 15
Jeff Wade, D. J. White & Co. 2.... 15
Jeff Wade, D. J. White & Co. 3 20
J. L. & J. H. Ralph, C. Claypool & Co. 10 10
J. L. & J. H. Ralph, C. Claypool & Co. 11 8
J. L. & J. H. Ralph, C. Claypool & Co. 12 50
J. W. Howard, W. J. Flesher 1 ..... dry
Van Russelburg, J. A. Ronshausen 2 dry
Bob Hamilton 176-a, Cumberland Petroleum 19 30
Cicero Wade, Cumberland Petroleum 1 ..... dry
C. D. Westerfield, Creek Drilling 6.. dry
Joe Norris, Weir & Stewart 3..... 60
Payton Royal, Ogle & Maxey 5..... 75
Payton Royal, Ogle & Maxey 6..... 50
Payton Royal, Ogle & Maxey 7 35
Payton Royal, Ogle & Maxey 9 50
Cora Wells, Mecca Oil 24 50
Cora Wells, Mecca Oil 25 50
Allie Evans, Butte Dredging 6, 7 .... dry
Gil Farmer, H. B. Cameron & Co. 5.. dry
Westerfield hrs., D. T. Bolling & Co. 1 30
R. M. Miller, Dearborn Oil 3 2
Nancy Farmer, Sirman Co 14 ..... gas
Nancy Farmer, Sirman Co. 19 50
Nancy Farmer, Sirman Co. 20 300
J. C. Smith, Wood Oil, Inc., 1 30
J. E. Mitchell, Wood Oil, Inc., 6 15
Maggie Ferguson, Wood Oil, Inc., 1.. dry
Sadie Thomas, Dundee Oil 3 15
Sadie Thomas, Dundee Oil 4 12
Jud Hewlett, Daley & Lowman 1.... dry
Dan Smith, Whittmer Oil & Gas 1.... dry
Ira Bryant, Daley & Lowman 1..... dry
Clarence Patton, Standard Oil of Ky. 1 ..... dry
Bellamy, A. F. Bellamy 1 20
Dodson, Cumberland Petroleum 1 .... dry
E. E. Fuqua, John Breen & Co. 3 10
Brown hrs., National Deposit Bank 8.. 80
M. E. Medcalf, Chester Oil 2 40
Ida Kelley, H. C. Smith Oil 1 ..... dry
Ida Kelley, H. C. Smith Oil 2 15
Ida Kelley, H. C. Smith Oil 3 ..... gas
Ollie Evans, Leeper Oil 5 60
S. F. Whitley, Pampas Oil & Gas 1 gas
S. F. Whitley, Meredith & Co. 1.... 10
Billy Tanner, Chester Oil 1 1

Wells completed 80
Production 4,109
Dry 22
Gas 3

DAVIESS COUNTY

Owensboro—R. C. Clayton, Creek Drilling 1 25
S. Hinton, Jetsan Oil & Co. 5 20
S. Hinton, Jetsan Oil & Co. 6 10
Tom O'Flynn, Creek Drilling 2 200
J. W. May, L. C. Young 1 ..... dry
Hamp Shelton, L. C. Young 1 ..... dry
J. C. Park, L. C. Young 3 ..... dry
Joe Birkhead, Creek Drilling 1 100
Chas. Cook, Smith & Co. 1 ..... dry
M. C. Ruby, Eastern Gulf Oil 8 40
W. A. Murraym, Eastern Gulf Oil 9 .. 20
E. L. Burns, The Petroleum Co. 16.. 55
R. F. Sands, Wood Oil, Inc. 4 8
R. F. Sands, Wood Oil, Inc. 5 5
First Nat. Bank, Penn-Indiana Oil 5 35
Salmon, Cumberland Petroleum 3 200
J. L. Park, L. C. Young 5 20
Lindsay Purcell, Goldburg, Young & Co. 4 25
Louis May, Brown & Engle 1 25
Jess Litsey, Ira Huff & Co. 1 ..... dry
Rollie Ambrose, L. S. Robbins 1 30
Whitesville Bank, Smith, Randolph & Co. 7 20
Robt. Moseley, Ohio Oil 1 ..... dry
R. E. Jackson, Cumberland Petroleum 2 ..... dry
J. H. Evans, Vickers, White & Co. 5 10
Lovell Howard, Vickers, Swarthout & Co. 4 15
Zulu Johnson, Mecca Oil 1 50
H. B. Trodgen, Trognite Oil 6 75
W. R. Russell, Petroleum Exploration 1 ..... dry
G. R. Westerfield, Ohio Oil 1 ..... dry
Whitesville Bank, Smith, Randolph & Co. 8 25
Widow Tanner, J. C. Ellis & Co. 1.. dry
Lindsay Purcell, Goldburg, Young & Co. 5 35
Lindsay Purcell, Goldburg, Young & Co. 6 40
J. H. Evans, Vickers, White & Co. 6.. dry
Lovell Howard, Vickers, Swarthout & Co. 5 ..... dry
J. W. Fireline, Robbins & Stimson 4.. 10
A. C. Clark, Imperial Oil & Gas 1.... dry

Wells completed 38
Production 1,098
Dry 13

HANCOCK COUNTY

Pellville—Coal Co., Daley & Lowman 1 30

HENDERSON COUNTY

Niagara—Clark, Niagara Oil & Gas 1.. 75
Basil Griffin, Unknown 1 20

Wells completed 2
Production 95

MUHLENBURG COUNTY

Greenville—Rhodes Kennedy, Ohio Oil 2 75

BRECKENRIDGE COUNTY

Glendean—Moorman, Hoosier Development 8 8
Moorman, Hoosier Development 9 12

Wells completed 2
Production 20

LARUE COUNTY

Hodgenville—Moore, F. C. Moore & Co. 1, 2, 3, 4 ..... dry

Wells completed 4
Dry 4

WAYNE COUNTY

District 5—Coffey-Oatts, Porter, Abbott & Co. 7 5
District 13—Nancy Jones & Co., Wm. O. Southern, Jr. 9 40

Wells completed 2
Production 45

MORGAN COUNTY

Wier Field—J. F. Lewis, Petroleum Exploration 1 ..... dry

LEE-OWSLEY COUNTIES

District 18—W. C. Burgen, J. D. Welch 3 ..... dry

WOLFE COUNTY

District 9—E. B. Roberts, Garrison Bros. & Co. 6 ..... dry

FLOYD COUNTY

District 21—Melvin Allen, United Carbon 1 ..... gas
S. B. Osborne, United Carbon 1 ..... gas
Caroline Collins, Yolando Oil 1 .... gas

Wells completed 3
Gas 3

CLAY COUNTY

Crane Creek—J. F. Johnson, Petroleum Exploration 1 ..... dry
America Reid, Petroleum Exploration 1 ..... dry

Wells completed 2
Dry 2

ROCKY MOUNTAIN AREA

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total July	1	0	1	0	2	29	31
Total June	0	0	0	0	4	32	36
Difference	1	0	1	0	2	3	5

WYOMING

Summary of Field Operations

District or	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Salt Creek ..	5	4,321	0	0	2	8	10
Big Horn	0	0	0	0	1	11	12
Carbon	2	0	1	1	0	12	12
Fremont	0	0	0	0	0	13	13
Hot Springs.	0	0	0	0	1	4	5
Johnson	0	0	0	0	0	3	3
Lincoln	0	0	0	0	2	7	9
Natrona (Ex. Salt Creek)	0	0	0	0	1	8	9
Park	1	0	1	0	7	35	42
Sweetwater .	2	1,100	1	0	2	12	14
Sublet	1	240	0	0	2	22	24
Uinta	1	50	0	0	6	13	19
Miscellaneous	0	0	0	0	4	13	17
Total July	12	5,711	3	1	28	161	189
Total June	16	1,106	3	0	27	153	180
Difference	4	4,605	0	1	1	8	9

COLORADO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Fremont	2	25	1	0	0	16	16
Jackson	0	0	0	0	0	6	6
Larimer	0	0	0	0	2	7	9
Moffat	0	0	0	0	6	5	11
Pueblo	12	0	12	0	1	3	4
Rio Blanco .	0	0	0	0	0	2	2
Routt	1	0	1	0	1	3	4
Miscellaneous	0	0	0	0	1	38	39
Yuma	0	0	0	0	0	2	2
Total July	15	25	14	0	11	82	93
Total June	9	1,089	4	1	10	88	98
Difference	6	1,064	10	1	1	6	5

NEW MEXICO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Chaves	0	0	0	0	1	3	4
De Baca	0	0	0	0	0	3	3
Eddy	3	250	1	1	2	15	17
Lea	6	351	1	2	12	27	39
McKinley ...	0	0	0	0	3	9	12
Rio Arriba .	0	0	0	0	2	3	5
San Juan ..	2	800	1	0	4	14	18
Miscellaneous	0	0	0	0	7	9	16
Total July	11	1,401	3	3	31	83	114
Total June	4	0	4	0	44	81	125
Difference	7	1,401	1	2	13	2	11

MONTANA

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek	0	0	0	0	0	2	2
Kevin Sunburst	17	261	2	5	9	35	44
Pondera	4	150	1	0	5	5	10
Miscellaneous .	9	42	4	3	6	72	78
Total July ..	30	453	7	8	20	114	134
Total June ..	53	2,353	9	11	33	100	133
Difference ..	23	1,900	2	3	13	14	1

MONTANA

Wells Completed

25-25-2	McKee, Smith & Bradford 5..	10
29-25-1	Maughans, Sweeney Oil Co. 5..	100
19-25-1	Emmons, Dakota Montana 25..	25
29-25-1	Maughans, Sweeney Oil Co. 6..	5
13-24-2	Morton, Campbell et al 2.....	6
20-25-1	Zachor, Cosmos Pet. Co. 4....	Dry
28-25-1	Levnick, Deloraine Oil Co. 4..	5
25-24-1	Burns, Hannah Porter 1	Gas
16-24-1	State,, Kalispel Oil Co. 3	Dry
18-25-1	Kalispel, Barmac Prod. Co. 2..	10
31-25-1	Allen, Big West Oil Co. 2	80
35-24-1	Hoil, Dalota Montana 1	Gas
3 -32-2	McLeod, Northern Nat. Gas. Co.	Gas
25-25-2	Stannard, Wyomont Oil Co. 7..	10
23-25-3	Sohn, Murphy Petr. 2	10
1-25-2	Weir, Sunburst Refg. Co. 2....	Gas
28-33-1	Marmont, Vashti Petro 1	Gas
13-27-4	Lederer, Arch Oil Co. 1	5
16-27-4	State, Fulton Petr. Co. 3.....	115
22-27-4	Sunburst, Texas Pacific 1	Dry
10-27-4	Gjullin, Midwest Rfg. Co. 22 Sw	30
5-25-1	Skoog Prod. Ind. Oil Co. 2 ...	6
15-25-1	Remple, Texas Pac. C. & O. 1	Dry
1- 7-59	Gas Dev. Co. 29	Gas
14- 5-60	Gas Dev. Co. 39	Gas
25- 1-21	Crystal Carbon Co. 1	Dry
17-36-6	Watford, Sunburst-Bears Den 1	36
19-35-5	Flowerlee, Calif. Synd. 1	Dry
	Bowdoin, Jones Oil Co.	Gas
12-22-3	Swanberg, Elkhorn Oil Co.....	Dry

Completions 30
Production 453
Dry 7
Gas 8

WYOMING

WELLS COMPLETED

7-26-89	Prod. & Ref. Corp. 7	gas
14-20-88	Lake Valley Oil Co. 1.....	dry
35-40-79	SW Midwest Oil Co. 22-SD-2.	101
26-40-79	SW Wyoming Assoc. 22-SD-3.	3247
26-40-79	SE Midwest Oil Co. 18-A....	10
27-40-79	SE Midwest Oil Co. 24-SD-3 .	788
26-40-79	NE Wyo. Oil Fields 36-SD-2.	175
21-51-101	Lyle, Lenco Pet. Co. 1	dry
26-20-104	Prod. & Ref. 1	dry
11-26-90	Prairie O. & G. Co. 74-A....	1100
34-27-113	Calif. Pet. Corp. 7-D.....	240
23-15-118	Druscilla Connell 4	50

Wells completed 12
Production 5711
Gas production 40,000,000
Dry and abandoned 3

COLORADO

WELLS COMPLETED

21-20-69	Hassler, W. M. Conley 6.....	25
35-18-70	Dunn, Continental Oil Co. 3..	dry
16-22-63	State, Christy-Frantz Corp. 1.	dry
13-22-63	Carr, Nordic Oil Synd. 1.....	dry
45-21-63	Apex Oil Synd. 1.....	dry
35-21-63	Oliver-Lubera, Sundance Oil 1.	dry
4-22-63	State, Giant Ledge Oil 1.....	abd
19-22-62	Stanbeck, Dickason-Hench Oil 1	dry
14-22-63	Bush, Security Oil 1	dry
4-22-63	State, C. W. Sheffer 1.....	dry
16-22-63	Dudley-Lubers, Morrison et al 1	dry
13-22-63	Vey, Christy-Frantz Corp. 1..	dry
34-21-63	Mannerich, Christy-Frantz Corp. 1	dry
35-22-63	Pahl, Amarillo Prod. Co. 1....	dry
18-6n-86	State-Oliver, Texas Prod. 1 ..	abd

Wells completed 16
Production 25
Dry and abandoned 14

NEW MEXICO

WELLS COMPLETED

19-17-30	Burch, Grayburg Oil Co. 2....	250
5-17-28	Vandergriff, Pecos Valley Gas 4	gas
22-16-30	Sellery, Ohio Oil Co. 1.....	dry
18-20-34	Mcd. & Jewett, Henderson, Dexter & Blair 1.....	60
13-17-34	State, Vacuum Oil Co. 1.....	231
8-21-35	State, Empire G. & F. Co. 2-B	dry
22-23-36	State, Texas Pacific C. & O. 1	gas
23-25-36	Wilson, Cranfill & Reynolds 1	60
29-25-37	Crosby, Pueblo Oil Co. 1.....	gas
2-29-19	Santa Fe, Continen.al Oil 17..	800
20-28-11	Beardsley, Milwaukee-New Mex. Synd.	dry

Wells completed 11
Production 1401
Gas production 36,000,000
Dry and abandoned 3

UTAH

WELLS COMPLETED

36-26-20	Shafer, Utah South. Oil Co. 1-A	dry

CENTRAL OHIO FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Drg.	Ttl.
Ashland	19	96	8	5	15	26	41
Medina	5	27	1	2	2	9	11
Lorain	4	0	1	3	3	5	8
Wayne	4	0	2	2	3	7	10
Holmes	1	25	0	0	3	10	13
Ashtabula ..	0	0	0	0	0	3	3
Richland	2	0	2	0	3	5	8
Knox	4	0	3	1	9	6	15
Coshocton	9	17	2	2	6	2	8
Summitt	4	0	0	4	1	20	21
Licking	11	196	0	2	14	12	26
Muskingum ..	9	187	4	3	5	12	17
Athens	10	1	0	9	5	18	23
Meigs	13	32	1	5	4	15	19
Jackson	6	0	3	3	13	9	22
Vinton	4	17	0	1	4	2	6
Pickaway	0	0	0	0	0	1	1
Lawrence	1	0	0	1	0	2	2
Mahoning	1	0	1	0	0	1	1
Starke	4	6	0	2	1	3	4
Trumble	1	0	0	1	0	0	0
Fairfield	2	0	0	2	0	2	2
Guernsey	7	123	2	3	8	10	18
Belmont	0	0	0	0	0	5	5
Tuscarawas .	1	0	0	1	0	0	0
Total July	122	727	30	52	99	186	285
Total June	139	1,769	42	47	95	190	285
Difference .	17	1,042	12	5	4	4	0

WELLS COMPLETED

ASHLAND COUNTY

Greene—E. S. Glasco, Ohio Fuel Gas 2-3,501	dry
Vermillion—Mary J. Armstrong, Ohio Fuel Gas 1-3,488	dry
H. J. Long, Ohio Fuel Gas 2-3,816	gas
Orange—G. & N. Hess, The Kemrow Co. 1	dry
Ben Evil, The Kemrow Co. 1	gas
Lake—John Smith 120-a, Robinson & Co. 2	4
J. A. Heffelfinger 16, Robinson & Co. 3	6
G. M. Heffelfinger 9, Robinson & Co. 1	gas
C. I. Sellers, Robinson & Co. 2	dry
E. A. Morris, Preston Oil 2-1,326	18
L. O. Chesrown, Davis & Co. 1.....	50
B. B. Chesrown, Mohican Oil & Gas 4	15
Cemetery Association, Shetler & Shetler 1	dry
J. Anderson, B. Siagel 1	gas
Mohican—A. & A. Metcalf, B. Siagel 3	3
A. J. Obrecht, W. J. Smith 2.....	dry
Rosanna Welty, Welty & Co. 2.....	dry
Perry—W. E. Strine, Robinson & Co. 11	dry
Ed. Barnhart, Robinson & Co. 6.....	gas
Wells completed	19
Production	96
Dry	8
Gas	5

MEDINA COUNTY

Harrisville—Glen Fetter, Glen Fetter & Co. 1	gas
J. O. Bensinger, Ohio Fuel Gas 1-3,734	dry
Guilford—J. J. Winkler, Ohio Fuel Gas 2-3,502	gas
Chatham—T. W. Brinkler, Oko Oil & Gas 24	25
J. & A. Jalensics, East Ohio Gas 5....	2
Wells completed	5
Production	27
Dry	1
Gas	2

LORAIN COUNTY

Grafton—Frank K. Nobles, Ohio Fuel Gas 1-3,609	gas
Eaton—Johanna Welly, Ohio Fuel Gas 1-3,586	gas
Carlisle—Paul Roling, Ohio Fuel Gas 1-3,603	dry
J. C. Palmer, Wiser Oil 1	gas
Wells completed	4
Dry	1
Gas	3

WAYNE COUNTY

Congress—M. Fulton, Ohio Fuel Gas 1-3,606	gas
Mary J. Gearhart, Garn-Woodward Oil 4	dry
Franklin—Willis J. Wise, Bryan & Co. 2	dry
Chester—J. M. Wengar, Harmon & George 1	gas
Wells completed	4
Dry	2
Gas	2

HOLMES COUNTY

Hardy—C. E. Schlarb, East Ohio Gas 2	25

RICHLAND COUNTY

Monroe—C. C. Arehart, Ohio Fuel Gas 1-4,696	dry
Worthington—Verda Rush, Ohio Fuel Gas 2-3,499	dry
Wells completed	2
Dry	2

KNOX COUNTY

Brown—Sally Reichert, Ohio Fuel Gas 4-3,561	gas
G. H. Kayler, Ohio Fuel Gas 1-3,587	dry
Jefferson—Reno Blaubaugh, H. E. Perkins 1	dry
Berlin—John Spohn, Schenker Bros. 1 .	dry
Wells completed	4
Dry	3
Gas	1

COSHOCTON COUNTY

Clark—Victor Shiebe, Preston Oil 2-1,309	gas
Arthur Eppley, The Pure Oil 1	5
Franklin—C. B. A. Cory, Ohio Fuel Gas 1,3-460	gas
Newcastle—Martin Mizer, Bell Bros. 2	dry
Fred S. Ringwalt, Bell Bros. 1	dry
Mill Creek—Peter Fender, Fender Oil 5	6
Peter Fender, Fender Oil 6	2
Peter Fender, Fender Oil 7	1
Peter Fender, Fender Oil 8	3
Wells completed	9
Production	17
Dry	2
Gas	2

SUMMITT COUNTY

Franklin—A. F. Smith, East Ohio Gas 1	gas
Elton H. Dailey, East Ohio Gas 1..	gas
C. & M. Rumminger, F. A. Brendall & Co. 1	gas
Green—Sam Herring, George Eagon 1..	gas
Wells completed	4
Gas	4

LICKING COUNTY

Fallsburg—F. E. Slabaugh, Pure Oil 1	15
John W. Little, Emerald Petroleum 5	60
Thos. Moran, Ohio Fuel Gas 1-3,602..	5
John W. Little, Murphy Petroleum 2..	50
Perry—Nellie Smith, Settles Oil 2	5
J. C. Burkholder, Whitehill Oil 3....	gas
Hanover—Chas. O. Bannon, Hope Construction & Refg. 3	50
J. C. Williams, North Fork Oil 6....	2
Madison—L. J. Georgetta, Ohio Fuel Gas 1	6
Licking—Jos. Davis hrs., Heisey Gas 8	gas
Franklin—J. W. Motherspaw, Armstrong & Lyttle 12	3
Wells completed	11
Production	196
Gas	2

MUSKINGUM COUNTY

Washington—Albet Adams hrs., Geo. Jewell & Co. 1	gas
Falls—H. M. Ludman, Athey Drilling 1	gas
Jackson—Jasper Ashcraft, Pure Oil 1..	167
Pyrre—A. C. Spring, Mid-East Gas 1..	dry
Bowden Bros., L. E. Burley 1	dry
Everette J. Moore, Mid-East Gas 1..	20
Harry Haines, Palmer & Geisinger 1..	gas

Union—J. O. Ball, The Atha Co. 1 .... dry
Highland—M. R. & E. Emier, Wehrle Co. 1 .... dry

Wells completed 9
Production 187
Dry 4
Gas 3

ATHENS COUNTY

Ames—John Fleming, Ohio Fuel Gas 3-3,625 .... gas
Geo. Linscott, Ohio Fuel Gas 2-3,624.. gas
Kasler-Sayer, Orndoff & Co. 1 .... gas
Berne—Flora Fleming, Ohio Fuel Gas 1-3,590 .... gas
C. C. Curtis, Smith & Thomas 2.... 1
Carthage—E. A. Secoy, Ohio Fuel Gas 1-4,742 .... gas
Lodi—Francis F. Sargent, Ohio Fuel Gas 1-3,593 .... gas
Geneva Mansfield, Ohio Fuel Gas 1-4,744 .... gas
Athens—Hattie Beasley, Craig & Co. 7.. gas
Rome—W. & C. Richardson, Ohio Fuel Gas 1-3,599 .... gas

Wells completed 10
Production 1
Gas 9

MEIGS COUNTY

Sutton—Robt. Crew, Preston Oil 1-958.. 3
Carl J. Easterday, Preston Oil 6-1,316 6
Cross Estate, Southern Ohio Gas 3.... 4
Mary Jividen, Tyree & Co. 2 2
H. M. Capenhart, Tyree & Co. 6 .... gas
Wm. Carnahan, Tyree & Co. 11 10
Ray Krauter, Simon Lebow & Co. 3.. 3
W. B. Gross, R. C. Miller & Co. 3.... dry
Chester—W. Genheimer, Frick & Barnaby 6 4
Bedford—Francis Winget, Ohio Fuel Gas 1-3,577 .... gas
W. L. Whaley, Ohio Fuel Gas 2-4,734 gas
Scipo—Lydia Rowley, H. W. Taggart & Co. 3, 4 .... gas

Wells completed 13
Production 32
Dry 1
Gas 5

JACKSON COUNTY

Franklin—W. E. Froshey, Ohio Fuel Gas 3-3,497 .... gas
Effie Cline, Ohio Fuel Gas 1-3,570.... dry
Milton—Cora Branton, Ohio Fuel Gas 1-3,536 .... dry
Lick—Leo. Evans, Penn Ohio Gas 6.... gas
Coal—Nannie Shook & Co., Ohio Fuel Gas 1-3,452 .... dry
Jefferson—M. L. Morgan, Libby-Owens Glass 2 .... gas

Wells completed 6
Dry 3
Gas 3

VINTON COUNTY

Jackson—John C. Bone, Southern Oil 5 8
Swan—Christ Herrold, I. C. Robinson & Co. 2 .... gas
Knox—Garfield Brooks, Co-operative Oil 4 5
Harvey W. Brooks, Gordon Oil 2 4

Wells completed 4
Production 17
Gas 1

LAWRENCE COUNTY

Upper—Hecla Iron & Mining, Inland Oil Corp. 5 .... gas

MAHONING COUNTY

Smith—Bert Shocker, Pittsburg parties 1 .... dry

STARKE COUNTY

Lawrence—Steve Koesis, Johnson & Stoltz 1 .... gas
Phil Moke, Ohio Brass Co. 1 .... gas
Lexington—Fee, Alliance Machine Co. 2 2
Holles, F. A. Holles 1 4

Wells completed 4
Production 6
Gas 2

TRUMBLE COUNTY

Mecca—Al. F. Rush, John Arthur 1.. gas

FAIRFIELD COUNTY

Pleasants—John Holcomb, City Natural Gas Works 2 .... gas
Berne—Phil Farmer, City Natural Gas Works 1 .... gas

Wells completed 2
Gas 2

GUERNSEY COUNTY

Wheeling—Wilbur Wilson, East Ohio Gas 2 55
J. O. Alloway, Blackstone & Co. 4.... 68
Robt. McMurray, J. T. Watson & Co. 1 .... dry
Westland—H. & M. Turner, Cambridge Glass 1 .... gas
Millwood—T. C. Henderson, Geo. Jewell & Co. 1 .... gas
Knox—Wm. H. Sheely, Ohio Fuel Gas 1-3,576 .... dry
Spencer—W. J. Nickle, Ohio Fuel Gas 2-4,751 .... gas

Wells completed 7
Production 123
Dry 2
Gas 3

TUSCARAWAS COUNTY

Sugar Creek—Wm. Anglis, Brick Oil & Gas 2 .... gas

LIMA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	1	5	0	0	0	3	3
Hancock	5	65	0	2	2	3	5
Allen	3	38	0	0	0	3	3
Auglaize	1	20	0	0	0	2	2
Sandusky	2	55	0	0	0	2	2
Mercer	1	5	0	0	1	2	3
Seneca	5	1,072	1	1	0	7	7
Lucas	0	0	0	0	0	1	1
Wyandot	0	0	0	0	1	0	1
Shelby	0	0	0	0	0	1	1
Huron	0	0	0	0	0	2	2
Total July . 18	1,260	1	3	4	26	30	
Total June 21	536	5	2	3	22	25	
Difference . 3	724	4	1	1	4	5	

WELLS COMPLETED
WOOD COUNTY

Bloom—Dave Biehler, Mays & Bushey 2 5
Montgomery—D. E. Jackson, Ohio Oil 9 abd
H. B. Bierly, Ohio Oil 3, 4 .... abd
Phil Anfree, Ohio Oil 2, 5, 7 .... abd
Henry Pierce, Kinzey & Hurley 1, 2. abd

Wells completed 1
Production 5
Abandoned 8

HANCOCK COUNTY

Liberty—Sol Fry, L. Cramer 3 15
Chris. Fullwiler, Newton Oil 5.... 30
Eagle—Allice Stauffer, Star & Clark 13 20
Delaware—Harley Eatherton, Harmon, Watts & Talbot 1 .... gas
Austin S. Hickle, Harmon, Watts & Talbot 1 .... gas

Wells completed 5
Production 65
Gas 2

ALLEN COUNTY

Bath—William Lenney, Ira B. Post & Co. 9 20
C. E. Baldwin, B. L. Carmon & Co. 1. 15
Marion—Phil Hietner, Alva Spencer & Co. 4 3
William Barnt, A. O. John 3 .... abd
Stewart-Cramer-Foust, M. P. Colt No. 2 Tr. 4 .... abd
Spencer—John Lauer, M. J. Lynch 1, 2, 3 .... abd
Cath. Donhaiser, M. J. Lynch 1 .... abd
Sugar Creek—Charles S. Irvin, Jacobs & Hasson 2, 7, 8 .... abd

Wells completed 3
Production 38
Abandoned 9

AUGLAIZE COUNTY

Noble—Frank Wahrer, Frank Wahrer & Co. 5 20
Frank Wahrer, Frank Wahrer & Co. 3 abd
German—Rosine Heinfeldt, E. C. Huenke & Co. 1 .... abd

Wells completed 1
Production 20
Abandoned 2

SANDUSKY COUNTY

Washington—Paul J. Fought, Gibsonburg Oil 1 50
Jackson—Mary E. Betts, Cessna, Feasel & Lowman 2 5
Woodville—Caleb Clink, Ohio Oil 10, 21 .... abd

Wells completed 2
Production 55
Abandoned 2

MERCER COUNTY

Union—S. M. Houser, S. W. Hauser 1.. 5
Levina Winger, Consolidated Pipe & Supply 2, 3, 6, 7, 8, 9, 10, 11, 12 ... abd
Dan Davis, Consolidated Pipe & Supply 7, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 .... abd

Wells completed 1
Production 5
Abandoned 24

VAN WERT COUNTY

Jennings—John Lauer, M. J. Lynch 3, 4, 5, 6 .... abd
Hartzer & Purdy, M. J. Lynch 1, 2, 3, 4, 5 .... abd
Tobias Miller, M. J. Lynch 7 .... abd

Abandoned 10

SENECA COUNTY

Liberty—L. C. Park, J. L. Beam 1 .... dry
August Flechtner, August Oil 4 .... gas
Pleasants—Ida M. Rosenberger, W. J. Poyser & Co. 2 1000
Charles & Ida Miller, Ohio Oil 2 70
Jackson—M. Jacobs, Columbus-Tiffin Oil 1 2
Mat McEwen, North Ohio Oil 1, 2, 3, 4, 5 .... abd
Joe Riley, North Ohio Oil 1, 2, 3, 4.. abd
Reinbold heirs, Ohio Oil 1, 3 .... abd

Wells completed 5
Production 1072
Dry 1
Gas 1
Abandoned 11

SOUTHEAST OHIO
WELLS COMPLETED
MONROE COUNTY

Wilhelm, Shay, McMullin & Co. 1 .... dry
Knowlton hrs., Hope C. & R. Co. 10.... 40
Stalling, Preston Oil Co. 1 .... dry
Draper, Perry O. & G. Co. 1 .... dry
Henry Hercher, Henry Hercher 14.... 2
Ward, F. H. Ward & Co. 4 .... dry
Balch, Hilliard & Co. 3 1

PERRY COUNTY

Moore, Ohio Fuel Gas Co. 1 .... gas
Offenbacher, Ohio Fuel Gas Co. 5 40
Turner, Pure Oil Co. 3 50
Cannon, Guthrie & McIntyre 1 .... gas
Guy, Bell & Co. 1 .... gas
Brumage, Crowley & Co. 1 .... gas
Bateson, Cline & Co. 2 .... dry
Spohn, Preston Oil Co. 3 .... dry
Henlock Coal Co., Kachelnacher Est. 3.. 10
Acker hrs., Hope C. & R. Co. 3 .... gas

HOCKING COUNTY

Stone, Gordon Oil Co. 10 .... gas
Griffith, Gordon Oil Co. 4 .... dry
Marks, Preston Oil Co. 5 25
Bendin, Pool Oil Co. 1 5
Sonday C'K C. Co., Preston Oil Co. 1,309 85
Bone, Southern Oil Co. 5 8

GUERNSEY COUNTY

Calloway, Blackstone & Co. 1 5
McMurray, Watson & Co. 1 .... dry
Miller, East Ohio Prod. Co. 2 65

HOLMES COUNTY

Schlarb, East Ohio Gas Co. 2 8
Kilgore, Ohio Fuel Gas Co. 1 .... dry

COSHOCTON COUNTY

Scheibe, Logan Gas Co. 2 .... gas
Eppley, Pure Oil Co. 1 10

MUSKINGUM COUNTY

Ashcraft, Pure Oil Co. 4 175
Bowden, W. Va. & Penn O. Co. 1 .... dry
Spring, Wittmer O. & G. Co. 1 .... dry
Watson, Jewel & Co. 1 .... gas
Moore, Wittmer O. & G. Co. 1 10

LICKING COUNTY

Rector, Hope C. & R. Co. 2 3
Moran, Preston Oil Co. 1 10
Jeffers, Preston Oil Co. 1 1
Davis, A. H. Heisey Co. 5 .... gas
Motherspaw, Peoples B. & T. Co. 12.... 3
Smith, Robinson & Co. 9 3
Heffelfinger, Robinson & Co. 9 2
Chesrown, Robinson O. & G. Assn. 4.... 15
Morris, Preston Oil Co. 2 5
Blubaugh, Upham Gas Co. 2 .... dry
Speckman, Hultz & Kuntz 1 20
Slabaugh, Pure Oil Co. 1 15
Little, Murphy Pet. Co. 2 50

VINTON COUNTY

Brooks, Co-operative Oil Co. 4 3
H. Brooks, W. J. Sperry, trustee 2 4
Beasley, Gross & Fribault 1 .... gas

NOBLE COUNTY

Gregg hrs., Rich Bros. & Co. 1 1
Mallett, Permian O. & G. Co. 1 .... gas
Harper hrs., Clay & Co. 1 .... gas
McKee Bros., McKee Bros. 1 .... dry
Bryant, Clark & Co. 1 .... dry
Wilson, Burbacher & Co. 2 1
Brown, G. D. Greene 1 1
Schwallie, Schwallie Oil Co. 2 1
Bonar, Westerman & Co. 3 1
Huffman hrs., Evans & Co. 1 1
Park, Perk & Co. 3 1
King, Huntsman & Co. 3 .... gas

ATHENS COUNTY

Nelsonville C. C. Co., Campbell & Berlin 14 .... gas

MORGAN COUNTY

Hallowell, Woodyard & Co. 1 1
Harris, W. S. Harris 7 .... dry

MEIGS COUNTY

Grunler, Leifeight & Co. 1 .... gas
Winget, Ohio F. S. Co. 1 .... gas
Heitzer, Ohio F. S. Co. 2 6
Easterday, Preston Oil Co. 6 5
Crew, Preston Oil Co. 3 5
Carnahan, 25 Association, Inc. 11 15
Camden, B. M. Tyree 2 5
Capehart, B. M. Tyree 6 .... gas
Krauter, Lebow & Co. 3 5
Cross, Millers & Co. 3 .... dry
Cross, Southern Ohio Gas Co. 4 5
Wolfe, Caywood & Co. 1 .... dry
Bambey, W. Genheimer 6 5

WASHINGTON COUNTY

Hays, Zwingle Bros. & Co. 1 2
Mendaenhall, Parson & Sweeney 4 2
F. Hays, Frank Hays 2 2
Leasre, Turney & Co. 4 2
Stone, Buckley & Co. 21 1
Plumer hrs., Crescent Prod. Co. 36.... 10
McVey hrs., Henderson Oil Co. 1 5
Stephens, Henderson Oil Co. 17 1
Chandler, Mallory & Co. 10 .... dry
Hall hrs., Southern Oil Co. 11 2
Schelsbaufg, Harry Binnegar 1 1
Bergen Oil Co., Peoples B. & T. Co. 22.. 1

JEFFERSON COUNTY

Hutchison, H. Kellerman 11 1
Cooper, Gregg & Co. 3 1
Edmiston, Tope & Co. 7 1

CARROLL COUNTY

Neel, Ben Oil Co. 1 1
Roof, Kennedy & Co. 14 1

STARK COUNTY

Stoker, Pgh. Parties 1 .... dry
Purce lot, Alliance Machine Co. 3 5
Heiler lot, Alliance Machine Co. 1 5

MEDINA COUNTY

Brinker hrs., Oko O. & G. Co. 24 25
Jelver, East Ohio Prod. & Refining Co. 4 30

Wells completed 101
Production 830
Dry 19
Gas 12

SOUTHWEST PENNSYLVANIA
WELLS COMPLETED
WASHINGTON COUNTY

Tannehill, Perry Bishop 1 10
Quail, E. J. Young 1 1
Leel, Washington Oil Co. 1 5

BUTLER AND ALLEGHENY COUNTIES

Backhaus, Barbry & Hardt 3 5
Campbell hrs., Rodgers & Co. 1 1
Shook, Heck & Co. 1 .... gas
Johnston, Reimer & Co. 1 .... gas
Markle, F. M. Markle 1 .... gas
Cole, Phillips G. & O. Co. 2 .... gas
Meister, Monier & Co. 1 8
Bets, Heater & Co. 2 .... gas
Coventry, E. L. Oles 1 .... gas
Potts, Duncan & Coulter 1 5
Wightman, Harbison & Co. 1 3

BEAVER COUNTY

Shillito, Ambridge parties 1 1
Little, Wilet & Co. 1 .... gas
Davidson, J. L. Abrams 1 .... gas

WESTMORELAND COUNTY

Barnett, Phillips G. & O. Co. 2 .... gas

GREENE COUNTY

Lemley, Convex Glass Co. 1 .... dry
Blaker, Equitable Gas Co. 1 .... gas
Lynch, Greensboro Gas Co. 1 10
South, J. L. Garard 15 1
Longanecker, J. L. Garard 9 2
Kearns, Freeland & Co. 2 .... gas
Hagan, Meals & Co. 6 3
Scott, Carnegie Gas Co. 4 .... gas
Fergus, Mfrs. L. & H. Co. 3 .... gas
Waters, Boundy Bros. 1 .... dry

Wells completed 28
Production 55
Dry 2
Gas 12

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Adams	0	0	0	0	0	3	3
Gibson	1	0	0	1	0	5	6
Pike	2	0	2	0	0	3	3
Daviess	1	1	0	0	1	0	1
Vigo	1	25	0	0	0	2	2
Sullivan	2	0	2	0	0	6	6
Spencer	6	40	4	0	0	5	5
Dubois	0	0	0	0	0	2	2
Perry	1	0	1	0	0	2	2
Warrick	0	0	0	0	0	2	2
Vanderburg	0	0	0	0	0	1	1
Knox	0	0	0	0	0	1	1
Benton	0	0	0	0	0	1	1
Foundtain	0	0	0	0	0	1	1
Wabash	0	0	0	0	0	1	1
Greene	0	0	0	0	0	3	3
Crawford	0	0	0	0	0	1	1
Posey	0	0	0	0	0	1	1
Lagrange	0	0	0	0	0	1	1
Martin	0	0	0	0	0	1	1
Johnson	0	0	0	0	0	1	1
Putnam	0	0	0	0	0	1	1
Morgan	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Marshall	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Total July . 14	66	9	1	1	52	53	
Total June 15	195	8	1	6	42	48	

WELLS COMPLETED
GIBSON COUNTY

Columbia—R. Onyett, Roxana Petroleum 2 .... gas

PIKE COUNTY

Washington—George, Chas. C. Taliaferro, Jr. 2 .... dry
Logan—Wm. Miley, Roxana Petroleum 1 dry
Madison—J. R. Gladish hrs., Murphy Oil 2 .... abd

Wells completed 2
Dry 2
Abandoned 1

DAVIESS COUNTY

Veale—Frank Gaither, L. G. Gee & Co. 7 1

VIGO COUNTY

Prairie Creek-Lennie Thomas, Siosi Oil Corp. 2 25

SULLIVAN COUNTY

Fairbanks—J. B. Buchamp, Moses McGilvary 1 .... dry
Gill—J. R. Johnson, Bailey & Seitz 1.. dry

Wells completed 2
Dry 2

SPENCER COUNTY

Huff—Wm. Arnold, Libb & Co. 1 .... dry
Troy—A. C. Huff, Ben Robinson & Co. 1 dry
Rockport—Nine Winchell, Ohio Oil 1.. dry
Ohio—Leo Strassell, Randall & Sharp 2 15
Geo. Cissena, E. M. Treat Co. 2.... 25
Brown Trust, Unknown 1 .... dry

Wells completed 6
Production 40
Dry 4

PERRY COUNTY

Dew Creek—Welborn, P. E. Tichenour & Co. 1 .... dry

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Muskegon	35	15,070	2	1	27	63	90
Isabella	8	2,700	3	0	4	25	29
Midland	4	1,050	1	0	2	2	4
Kent	0	0	0	0	4	2	6
Ottawa	0	0	0	0	0	4	4
Oceana	1	0	1	0	1	5	6
Newyago	1	0	1	0	3	9	12
Manistee	0	0	0	0	1	0	1
Mason	0	0	0	0	1	4	5
Van Buren	0	0	0	0	1	2	3
Shiawassee	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Montcalm	0	0	0	0	0	3	3
Sanilac	0	0	0	0	0	1	1
Alpena	0	0	0	0	0	1	1
Allegan	0	0	0	0	1	1	2
Tuscola	0	0	0	0	0	1	1
Huron	0	0	0	0	0	1	1
Cass	0	0	0	0	0	3	3
Mecosta	0	0	0	0	0	2	2
Lake	0	0	0	0	0	3	3
Gratiot	0	0	0	0	0	2	2
Clare	0	0	0	0	0	3	3
Kalkaska	0	0	0	0	0	1	1
Barren	0	0	0	0	0	2	2
Montmorency	0	0	0	0	1	0	1
Total July	49	18,820	8	1	46	142	188
Total June	52	17,878	10	3	74	113	187
Difference .	3	942	2	2	28	29	1

WELLS COMPLETED
MUSKEGON COUNTY

Muskegon—Torrent, Muskegon Oil Corp. 2 350
Stanley Daniloff, Muskegon Oil Corp. 5 250
Stanley Daniloff, Muskegon Oil Corp. 6 200
L. P. Haight, Lima Oil Corp. 4 100
Charles I. Giles, Swastika Oil & Gas 3 500
Charles I. Giles, Swastika Oil & Gas 4 300
M. Berkema, Swastika Oil & Gas 2... gas
John Kolovitz, Fleeger-Ohlson Assn. 1 5
Shoup Oil & Gas Co., Shoup 5 500
Henry Smeltekop, Thompson Brothers 1 200
W. R. Angell, Continental Oil & Gas 14 25
Ira Hallock, Charles W. Marsh & Co. 5 500
Gimino, Peerless Oil & Gas 1 10
Pearl Norris, Mitchell & Mesiroff 3... 350
John Yonker, Muskegon Oil Corp. 4..1000
Laketon—Charles Horton, Nelson & Witt 5 1000

George Fenner, Nelson & Witt A-2 .. 200
Albert Young, Royal Oil 2 1250
H. Young, Reed Oil 9 1200
Alfred Fenner, Witt & Wyant 2 500
Alfred Fenner, Witt & Wyant 3 800
Eva D. Malone, Ohio Producing & Refg. Co. 3 400
H. Shuler estate, Maire-Caswell-Kidder 4 ..... dry
H. Shuler estate, Maire-Caswell-Kidder 5 250
Frank Cihak, Johnson Oil & Refg. 3. 75
Mrs Edward King, Johnson Oil & Refg. 2 50
Albert Young, Cornelius & Brown 2..1000
Buteau, Neely, Foster & Senn 1 250
Harry Hewitt, Neely, Foster & Senn 2 800
J. D. Ross, Dixie Oil D-3 200
John DeDoot, Puritan-Majestic Oil 2. 800
W. P. Dinan, Rock Oil 1 1500
R. Andree, Nelson & Witt 2 500
Fruitport—W. B. Farr, Wright Oil 1 .. dry
Montague—McDonald, White River Oil Corp. 1 5

Wells completed 35
Production 15,070
Dry 2
Gas 1

ISABELLA COUNTY

Chippewa—Coon, Stilgenbauer & Russell 2 700
John McNeal, South Bend Oil Synd. 1 ..... dry
Virgil McClintic, Leonard Oil & Gas 2 300
Joclyn, Chippewa Oil & Gas 3 800
Curtis, Athens Oil & Gas 1 ..... dry
Bufford, Athens Oil Corp. 1 ..... dry
Reems, Pure Oil B-1 500
Sarah Roebuck, Pure Oil 2 400

Wells completed 8
Production 2700
Dry 3

MIDLAND COUNTY

Greendale—Harrison, Pure Oil 2 500
Laura E. Root, Pure Oil 2 500
Iosco Land Co., Pure Oil 1 ..... dry
Sias, Pure Oil 1 50

Wells completed 4
Production 1050
Dry 1

OCEANA COUNTY

Golden—Riel, Edward DuVal 1 ..... dry

NEWYAGO COUNTY

Sherman—James Hoppe, Jr., Sherman Oil & Gas 1 ..... dry

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Rgs.	Drg.	Ttl.
Clark	2	0	2	0	2	2
Crawford	3	21	1	1	5	6
Lawrence	3	70	1	0	1	1
Wabash	4	58	2	0	5	5
St. Clair	28	2,566	1	0	36	36
Effingham	0	0	0	0	1	1
Saline	0	0	0	0	4	4
Jefferson	0	0	0	0	1	1
Total July	40	2,715	7	1	55	56
Total June	17	1,094	2	2	34	36
Difference	23	1,621	5	1	21	20

WELLS COMPLETED
CLARK COUNTY

Marshall—J. W. Dawson, R. G. Holmes & Co. 1 ..... dry
E. C. Madison, Wade & Evans 1 .... dry

Wells completed 2
Dry 2

CRAWFORD COUNTY

Licking—J. H. Titsworth, Walter Squires & Co. 1 ..... dry
Robinson—S. D. Meserve Heirs, Associated Prod. 53 20
Harriett Sarver, Wiser Oil 1 ..... abd
Prairie—Sarah Randolph, One Sixth Oil 2 1
Martin—C. T. Stewart, Ohio Oil 4..... abd

Wells completed 3
Production 21
Dry 1
Abandoned 2

LAWRENCE COUNTY

Dennison—Wesley Clark, John Phipps & Co. 7 40
A. T. Bardon, Skidmore Oil 1 ..... dry
Petty—Thornton Combs, Silurian Oil 25 30
William Crump, Silurian Oil 15, 18, 22 abd

Wells completed 3
Production 70
Dry 1
Abandoned 3

WABASH COUNTY

Wabash—Ed. Wright, Ridge Farm Oil 1 dry
Dr. C. E. Gilliatt, Ridge Farm Oil 1.. 28
Jos. Keyser, Joe S. Young, Jr., & Co. 11 30
Holson-Dorney, Phipps, Blosser & Co. 1 ..... dry

Wells completed 4
Production 58
Dry 2

ST. CLAIR COUNTY

Sugar Loaf—G. L. Tarlton, Ohio Oil 3.. 325
Phillip Frye, Ohio Oil 1 290
Matilda Dyroff, Ohio Oil 2 80
Matilda Dyroff, Ohio Oil 4 75
Matilda Dyroff, Ohio Oil 5 54
Chas. LaCroix, Morris & Yeager 1.... 30
Phil Crouch lot, Carnes & Shafer 1.. 150
Ed. Mayer lot, L. G. Blackman 1.... 100
Thos. Wade lot, J. C. Ellis & Co. 1.. 150
E. St. L. & C. W. Ry., Landwehr & Sacks 2 50
E. St. L. & C. W. Ry., Landwehr & Sacks 4 55
Public School lot, Timberlake & Coleman 1 50
Winterhoff-Le Camp lot, Timberlake & Coleman 1 50
Lena Harpst lot, Thos. Wheland 1 .. 200
Fred Nillman lot, Thos. Wheland 1 ... 200
Emma Otten lot, Chas. E. Knox Drilling 1 100
W. H. Lindermann, Sparks & Poulton 1 20
Anna Probst, Benoist & Co. 1 ..... dry
O. L. Dickey lot, Priver & Zeppenfeld 1 50
F. H. Weisenborn, Knox & Robinson 1 5
J. F. Shult, L. G. Blackman & Co. 1.. 15
G. & H. Heller lots, H. & M. Operating 1 125
Vickers-Beck lots, Lewis L. Hicks 1.. 75
E. & F. Hutchinson lots, St. Clair County Oil 1 160
Zeller lot, Tivy & Minges 1 12
Dupo Twp. High School lot, Ava Oil & Gas 3 50
McDaniel lot, Majestic Oil 1 40
Reichert lot, Robert Murray 1 55

Wells completed 28
Production 2,566
Dry 1

WEST VIRGINIA
WELLS COMPLETED
LEWIS COUNTY

Fetro, Pgh. & W. Va. Gas Co. 1 ..... gas

HARRISON COUNTY

Lowndes, R. T. Lowndes 5 ..... gas

MARION COUNTY

Beaty, So. P. O. Co. 3 ..... dry
Fox, Owens B. & M. Co. 1 ..... gas

WETZEL AND TYLER COUNTIES

McCord, Carnegie Gas Co. 1 2

MONONGALIA COUNTY

Duhurst, So. P. O. Co. 33 ..... dry
Edgell, Carnegie Gas Co. 10 10
Bartrug, Carnegie Gas Co. 3 40
Newman, H. M. C. O. & G. Co. 1..... 2

MARSHALL COUNTY

Reese, G. B. Patterson 1 5

HANCOCK COUNTY

Brenneman, R. J. Brade & Co. 35 8
Warrick, Jesse Miller 1 ..... dry

DODDRIDGE COUNTY

Craig-Dudley, Johnson & Sons 1 20
Bates, Trainer Bros. & Ash 1 ..... gas
Maxwell, Columbus Carbon Co. 33 .... gas
Pierpoint, Bachelor & Co. 5 15
Ford. Pgh. & W. Va. Gas Co. 1 ..... gas
Shinn, Nay & Maxwell 1 ..... gas

RITCHIE COUNTY

Mount, Bork O. & G. Co. 105 2
W. Va. Tract, C. B. Burk 18 6
Wilson, So. P. O. Co. 19 3
Mullenax, Reno Oil Co. 12 ..... dry
Ritchie Mines Tract, So. P. O. Co. 73.. 5
Nutt, S. M. Whan 4 2
Cokely hrs., Hudson Oil Co. 3 2
Storrs Tract, Lynch & Co. 11 20

CLAY COUNTY

Reed, Virginian G. & O. Co. 3 8
Summers, Virginian G. & O. Co. 6 10
Brown, Swan, Goshorn, Virginian G. & O. Co. 6 10

GILMER COUNTY

Rymer, Carnegie Gas Co. 1 ..... gas
Ellis, So. P. O. Co. 5 20
Kelly, Lewis & Co. 1 15

WOOD COUNTY

Kingwood Orchard Co., Kingwood Orchard Co. 1 1
McAtee, O. E. Grow 16 1

PLEASANTS COUNTY

Browning, S. Y. Ramage 28 ..... dry
Browning, S. Y. Ramage 29 ..... dry
Delong, Delong O. & G. Co. 9 ..... dry
Robinson, Hastings & Co. 1 ..... dry

ROANE COUNTY

Simmons, Federal O. & G. Co. 1 .... dry
Stockly, So. P. O. Co. 95 35
Stockly, So. P. O. Co. 94 10
Nixon, So. P. O. Co. 9 25
Nixon, So. P. O. Co. 10 20
Boggs, Virginian G. & O. Co. 8 15
Taliman, Virginian G. & O. Co. 2 5
Stockly, So. P. O. Co. 93 25
Graham, U. F. G. Co. 2 ..... gas
Westfall, U. F. G. Co. 1 ..... gas
Kendal, Grow & Decker 1 ..... gas

CALHOUN COUNTY

Stump, F. F. McIntosh 1 ..... gas
Barr, Hope Gas Co. 1 5
Raferty, G. L. Cabot 8 5
Hays, F. F. McIntosh 1 ..... gas
Proudfoot, Virginian G. & O. Co. 2 10
Williams-Buck, Snodgrass Bros. 1 .... gas
Hathaway, C. B. Lewis 1 10
Harris, G. L. Cabot 2 ..... gas
Morris, C. B. Lewis 1 ..... gas
Gharke, W. H. Bickel 1 ..... gas
Johnson, W. H. Bickel 1 ..... gas
Ball, Hamilton & Co. 1 ..... gas
Riddle, F. F. McIntosh 1 ..... gas
Hardman, Gerwig & Gother O. & G. Co. 11 ..... gas
Stevens, Oscar Garrison 1 ..... dry
Maze, M. F. Crowley 3 ..... gas
Simmons, B. J. Crowley 1 5

LINCOLN COUNTY

H. C. L. & M. Co., U. F. G. Co. 3,911.... gas
Meadows, U. F. G. Co. 3,907 ..... gas
H. C. L. & M. Co., U. F. G. Co. 3,900 .. gas
Stone, Earl Cameron 1 ..... gas
J. A. Stone, Earl Cameron 1 ..... gas
J. A. Stone, Earl Cameron 5 ..... gas

BOONE COUNTY

Anderson, Cameron O. & G. Co. 11..... gas
Anderson, Cameron O. & G. Co. 13 ..... gas
L. R. & P. Tract B., Pure Oil Co. 31.. 5
Federal Coal Co., Pure Oil Co. 38 ..... gas
Brown hrs., G. L. Cabot 2 ..... gas
Bedford, Owens B. & M. Co. 16 ..... gas
Casingham & Co., Owens B. & M. Co. 16 gas
Paytonia Land Co., Owens B. & M. Co. 18 ..... gas
Chambers, Owens B. & M. Co. 2 ..... gas
Prince, Mountain State Gas Co. 1 ..... gas
Chew, U. F. G. Co. 1,879 ..... gas

KANAWHA COUNTY

Thaxton, Burgess & Co. 1 2
King Land Co., U. F. G. Co. 2,550 .... gas
Derrick hrs., U. F. G. Co. 5,566 ..... gas
Lewis hrs., U. F. G. Co. 2,586 ..... gas
Buckner, Mill Creek O. & G. Co. 1 13

JACKSON COUNTY

Parrish, Heck Oil Co. 1 10
Hartley, Heck Oil Co. 3 15
McCarty, So. P. O. Co. 6 25
McCarty, So. P. O. Co. 7 10

MINGO COUNTY

Kirk, E. J. Evans 1 ..... gas

Wells completed 93
Production 440
Dry 9
Gas 42

EASTERN FIELDS

Summary of Wells Completed

Fields—	Comp.	Prod.	Dry	Gas
Allegany	28	54	0	0
Bradford	246	401	0	0
Middle Field	4	5	0	0
Venango-Clarion	47	68	3	4
Butler-Armstrong	17	25	5	0
S. W. Pa.	28	55	2	12
W. Va.	93	440	9	42
S. E. Ohio	101	830	19	17
Total July	564	1,898	38	75
Total June	553	2,677	42	59
Difference	11	779	4	16

Summary of Work Under Way

Fields—	Rigs	Drg.	Ttl.
Allegany	14	34	48
Bradford	23	123	146
Middle Field	0	2	2
Venango-Clarion	4	34	38
Butler-Armstrong	9	25	34
S. W. Pa.	6	30	36
W. Va.	50	112	162
S. E. Ohio	33	109	142
Total July 31	139	469	608
Total June 30	127	411	538
Difference	12	58	70

WELLS COMPLETED
BRADFORD FIELD

Mantz, 52, L. F. Kinley et al 1
291, Bing. 95, Howard McCollum 5
386, Bing. 75 Simpson et al .....water
386, Bing. 76, Simpson et al .....water
386, Bing. 77, Simpson et al 1
386, Bing. 79, Simpsin et al 1
386, Bing. 81, Simpson et al .....water
371, Bing. 57, Lane No. 1 et al 1
464, Bing. 30, R. S. Pringle 2
369, Bing. 75, D. W. Daley No. 2 1
Tract 27, Hazelwood Oil Co. 148 1
Plan A Tract 23, Hazelwood Oil Co. 161 1
Plan A Tract 23, Hazelwood Oil Co. 164 1
Plan A Tract 23, Hazelwood Oil Co. 167 1
Plan A Tract 23, Hazelwood Oil Co. 156 1
Plan A Tract 23, Hazelwood Oil Co. 160 1
Plan A Tract 23, Hazelwood Oil Co. 168 1
Plan A Tract 23, Hazelwood Oil Co. 01 .....pressure
Plan A Tract 23, Hazelwood Oil Co. 016 .....pressure
Plan A Tract 23, Hazelwood Oil Co. 017 .....pressure
Plan A Tract 23, Hazelwood Oil Co. 020 .....pressure
Plan A Tract 23, Hazelwood Oil Co. 170 1
Plan A Tract 23, Hazelwood Oil Co. 174 1
Plan A Tract 23 Allegany, Hazelwood Oil Co. A020 .....pressure
Plan A Tract 23 Allegany, Hazelwood Oil Co. A028 .....pressure
Plan A Tract 23 Allegany, Hazelwood Oil Co. A017 .....pressure
Plan A Tract 23 Allegany, Hazelwood Oil Co. A016 .....pressure
Plan A Tract 23 Allegany, Hazelwood Oil Co. 46 1
Plan A Tract 23 Allegany, Hazelwood Oil Co. 55 1
Plan A Tract 23 Allegany, Hazelwood Oil Co. 53 1
Plan A Tract 23 Allegany, Hazelwood Oil Co. 85 1
Plan A Tract 23 Allegany, Hazelwood Oil Co. 52 1
Plan A Tract 23 Allegany, Hazelwood Oil Co. 50 1
Bingham 151-154, S. P. O. Co. 010 ..pressure
Bingham 190-196, S. P. O. Co. 84 1
Bingham 450-474, S. P. O. Co. B-1 1
Bingham 439, S. P. O. Co. 122 1
Bingham 387, S. P. O. Co. 14 1
Bing-Satt, S. P. O. Co. 156 1
Bing-Satt, S. P. O. Co. 158 1
Dent, S. P. O. Co. 125 1
Burdick, S. P. O. Co. 74 1
B. I. Taylor, S. P. O. 38 1
B. I. Taylor, S. P. O. Co. 39 1
Cross, S. P. O. Co. 011 .....pressure
Burdick, S. P. O. Co. 73 1
Lee, Hallock and Weston, S. P. O. Co. 108 1
Hamlin, S. P. O. 125 1
Borden, S. P. O. Co. 04 .....pressure
Cross, S. P. O. Co. 06 .....pressure
H. E. Smith, S. P. O. Co. 192 1
Moody Lot 66, S. P. O. Co. 42 1
Forest Oil Corp., 5 water wells ..pressure
Forest Oil Corp, 17 oil wells 17
Forest Pet. Corp., 22 water wells..pressure
Forest Pet. Corp., 13 oil wells 13
Hawkins Oil Corp., 4 water wells..pressure
Riddell Estate, South Penn Oil Co.... 2
Riddell Estate, South Penn Oil Co.... 1
W. Weston, Jr., South Penn Oil Co.... 1
Riddell Estate, South Penn Oil Co. ... 1
Fee, Bradford Producing Co., Inc....water
Fee, Bradford Producing Co., Inc. ....water
Fee, Bradford Producing Co., Inc. ....water
W. Weston, Jr., Bradford Producing Co., Inc. .....water
Fee, Bradford Producing Co. .....water
Fee, Mr. and Mrs. L. S. Letson 2
Fee, E. Daly 4
Fee, W. T. Piper et al 2
E. J. Burns et al, Krampf & McCandless 1
Redfield et al, South Penn Oil Co. 1
Fee, Anna Jane Van Tine 3
Fee, Anna Jane VanTine 4
Fee, R. O. Landers et al 2
T. H. Kennedy, James W. Looker 5
Fee, Hazelwood Oil Co. 1
N. V. V. Franchot, Robert Jones 1
Fee (8 new wells), Hazelwood Oil Co. (each) 1
Fee, Healey Petroleum Corp. 6
Fee, South Penn Oil Co. .....pressure
Fee, Healey Petroleum Corp. .....pressure
Kinley Oil Co., Pure Penn Oil Co. ..pressure
Fee, J. A. Walters estate 6
N. V. V. Franchot, D. & P. Co. 1
South Penn Oil Co., John Jackson.pressure
Fee, Bradford Prod. Co. .....pressure
Fee, T. H. Kennedy 7
Fee, Osmrander & Fitzgibbon 1
Fee, M. J. Franks 6
Fee, L. G. Dana 5
Taylor fee, South Penn Oil Co. 1
Taylor fee, South Penn Oil Co. 4
Griffith et al, Tanner & McKean County Trust No. 46 8
Fee, George estate 1
Quintuple Oil Co., Jane Zane estate 1
Quintuple Oil Co., Mrs. Ione D. Miller et al 2
Bingham, Asso. Prod. Co. 2
Fee, W. H. McDermitt 2
Bingham, 474, South Penn Oil Co. 1
Bingham, 452, South Penn Oil Co. 1
Fee, South Penn Oil Co. 2
Bingham 212, Asso. Prod. Co. 4
Bingham 212, Asso. Prod. Co. 5
Bingham 214, Asso. Prod. Co. 7
Bingham 547, Alma Byron Collins..... wtr
Bingham 570, South Penn Oil Co. 4
Fee, Olean Pet. Co. 2
Fee, South Penn Oil Co. 10
Kennedy & Clarke, Phoenix Oil Co. 12
Fee, Wm. Kennedy Co. 3
Bingham 186, Hazelwood Oil Co. 5
Bingham 196, South Penn Oil Co. 10
Bingham 390, South Penn Oil Co. 3
Bingham 395, South Penn Oil Co. 5
Bingham 499, South Penn Oil Co. 1
Bingham 420, South Penn Oil Co. 2
Bingham 472, Grant & Mohan..... wtr
Bingham 580, Asso. Prod. Co. 2
Bingham 582, Asso. Prod. Co. 9
Bingham 576, South Penn Oil Co. 3
Middaugh, A. L. and L. M. Lilly 3
Saunderson, A. Schorman 2
Irvine, C. A. Potter 3
Duke, Schopperle Bros. 2
Kapp, T. H. Kirvin, Jr. 3
Borden, W. B. Milker 2
Haines, Coast & Storms 2
Huntington, Denwood Oil 2
Melvin, South Penn 2
Roggenbaum, J. Roggenbaum 3
Simpson, G. A. Simpson 4
Simpson, G. A. Simpson (4 wells)..pressure
Ekas, Dallas Oil 4
Bingham, Sou h Penn 2
Elder, S. H. Elder & Co. 3
Bingham, E. H. Camp estate 4
Bingham, E. H. Camp estate 4
Bingham, E. H. Camp estate 4
Bingham, E. H. Camp estate ..... wtr
Emerson, G. L. Rhodes et al 2
Hawkins, Newton-Smith Oil (3 wells) .....pressure
Chapin, Newton-Smith Oil (2 wells) .....pressure
Russell, C. E. Potter 3
Fee, D. J. Moody 2
Fee, L. G. Schenfield 2
D. C. & B., C. A. Duke 5
Fee, Grow Farm Oil 3
Chambers, Schorman & Williams 3
Rounds, N. V. V. Franchot 12
Rounds, N. V. V. Franchot 17
Fee, V. G. Smith 6
Fee, V. G. Smith 5
Fee, Curtis & Dunlavey Bros. 16
Fee, Mix Creek Oil (5 wells) .....water
Fee, Mix Creek Oil 1
Weston, G. C. Rice et al (2 wells) ....water
Bell, J. S. Brown 1
Whipple, South Penn 1
Melvin, South Penn 1
Jones, South Penn 1
Jones, South Penn 1
Enterprise B. & P., South Penn 1
Rew & Hodge, South Penn 1
Cotton, South Penn 1
Tract 1, Hazelwood Oil 1
Corwin, Cora M. Simons 1
Tract 13 Bingham, T. H. Kennedy 1
Daniels, Bradford Prod. 1
Borden, W. T. Piper 1
Gilpin, T. P. Thompson, Jr. 1
Gilpin, T. P. Thompson, Jr. 1
Gilpin, T. P. Thompson, Jr. 1
Hemlock, C. A. Duke 1

Wells completed 246
Production 401

MIDDLE FIELD

Lot 52 and 56, South Penn 1
Lot 52 and 56, South Penn 1
Henry, Hickey & Reig 16 2
Lot 164, Blanchard & Co. 12 1

Wells completed 4
Production 5

(Additional report of this field will be found on Page 160.)

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for June.

Runs

	Month	Dly. av.
Prairie P. L. Co.*	4,590,000	153,000
Gulf P. L. Co.	1,928,503	64,283
Texas P. L. Co.	776,754	25,892
Empire P. L. Co.	1,467,410	48,914
Magnolia Petroleum Co.	2,168,966	72,299
Cosden P. L. Co.	825,769	27,525
Sinclair P. L. Co.*	3,090,000	103,000
Oklahoma P. L. Co.	3,076,298	102,543
Other Lines*	6,270,000	209,000
Total June	24,193,700	806,456
Total May	24,994,401	806,271
Difference	801,701	185

Shipments

Prairie P. L. Co.†	6,482,036	216,068
Gulf P. L. Co.	1,861,270	62,042
Texas P. L. Co.	1,140,621	38,021
Empire P. L. Co.	1,307,260	43,575
Magnolia Petroleum Co.	2,259,312	75,310
Cosden P. L. Co.	825,769	27,525
Sinclair P. L. Co.†	3,541,996	118,066
Oklahoma P. L. Co.	3,139,447	104,648
Other Lines*	6,300,000	210,000
Total June	26,857,711	895,250
Total May	26,895,092	867,584
Difference	37,381	27,666

Stocks

Prairie Oil & Gas Co.*	36,972,000
Gulf P. L. & Gypsy Oil Co.	9,805,481
The Texas Company	8,351,672
Empire P. L. Co.	4,067,028
Mid-Continent Petr. Corp.	3,646,027
Sinclair Crude Oil Purch. Co.*	20,400,000
Magnolia Petroleum Co.	9,899,785
Oklahoma P. L. Co.	3,139,985
Carter Oil Co.	10,865,322
Other Companies*	10,675,000
Total June	117,822,300
Total May	118,519,294
Difference	696,994

*Estimated. †Prairie and Sinclair shipments include Texas crude oil.

Note—Stocks do not include approximately 5,600,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINE REPORT

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for May and June:

	May,'29	June,'29
Nat. Transit	253,769.33	249,968.12
S. W. Pa. P. L.	100,936.95	92,002.02
Eureka P. L.	330,915.89	352,969.84
Buckeye P. L. (Macksburg)	343,829.07	319,202.71
Buckeye P. L. (Cleveland)	12,404.92	11,542.95
Buckeye P. L. (Lima, etc.)	111,166.94	129,902.81
Indiana P. L.	5,648.56	6,724.29
Cumberland P. L.	199,988.52	171,863.19
N. Y. Transit	31,526.85	30,739.37
Tidewater P. L.	260,931.30	258,170.51
Pure Oil	62,790.66	55,379.02
Emery P. L.	69,891.53	65,056.05
Paragon Dev.	17,045.54	15,728.09
Stoll Oil Ref.	6,113.39	5,767.22
Total	1,856,959.95	1,765,016.19
Daily average	59,901.93	58,833.87

Note—Indian Refining Co. also reported other receipts of 329,785.68 bbls. Paragon Refining Co. had other receipts of 205,750.79 bbls. Paragon Development had other receipts of 192.83 bbls.

Petroleum Deliveries

The following tables exhibit the shipments of regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky for May and June:

	May,'29	June,'29
Nat. Transit	571,534.68	525,961.70
S. W. Pa. P. L.	384,900.26	443,209.38
Eureka P. L.	242,388.07	249,279.44
Buckeye P. L. (Macksburg)	219,775.55	192,141.28
Buckeye P. L. (Cleveland)	2,185.24	2,429.40
Buckeye P. L. (Lima, etc.)	1,597,379.34	1,574,302.18
Indiana P. L.	1,456,199.10	1,380,019.54
Cumberland P. L.	212,951.47	218,131.40
N. Y. Transit	282,843.83	250,768.40
Northern P. L.	190,228.92	160,597.19
Tidewater P. L.	210,039.70	222,328.15
Pure Oil	61,580.15	58,555.68
Emery P. L.	74,596.34	67,073.09
Paragon Ref.	186,897.16	199,644.69
Paragon Dev.	19,208.47	17,693.24
Total	5,712,708.28	5,562,134.76
Daily average	184,280.91	185,404.19

Indian Refining Co. reported other deliveries of 37,231.21 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of May and June:

	May,'29	June,'29
Nat. Transit	800,104.62	691,399.07
S. W. Pa. P. L.	466,368.92	535,525.28
Eureka P. L.	1,224,524.89	1,214,331.14
Buckeye P. L. (Macksburg)	463,437.44	462,009.23
Buckeye P. L. (Cleveland)	54,068.74	50,131.07
Buckeye P. L. (Lima, etc.)	1,917,019.67	2,088,348.18
Indiana P. L.	507,698.71	542,191.55
Cumberland P. L.	581,865.71	539,241.87
Southern P. L.	488,042.66	471,032.50
N. Y. Transit	233,636.63	256,751.69
Northern P. L.	408,913.03	332,496.47
Tidewater P. L.	1,291,934.65	1,279,682.60
Pure Oil	13,042.02	10,619.05
Emery P. L.	9,439.08	7,937.52
Paragon Ref.	17,668.51	23,504.69
Indian Ref.	152,604.26	145,225.30
Paragon Dev.	7,540.83	6,051.72
Tuscarora	265,649.33	264,796.11
Total	8,903,559.70	8,921,275.05
Decrease	74,612.15	
Increase		17,715.35

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of May and June showing the gross stocks of the above fields:

	May,'29	June,'29
Pennsylvania	3,350,662.61	3,279,171.77
Lima	587,235.33	635,542.29
Kentucky	787,127.03	718,933.39
Mid-Continent	3,788,393.60	3,914,745.95
Illinois	390,141.13	372,881.65
Total	8,903,559.70	8,921,275.05

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1926	1927	1928	1929
January	55,630	56,209	52,904	51,749
February	60,394	61,298	57,002	51,833
March	61,644	63,247	57,485	54,252
April	63,019	60,927	56,812	58,444
May	60,580	60,284	62,067	59,902
June	61,121	62,757	58,230	58,833
July	63,206	58,674	57,144	.....
August	61,815	60,870	57,745	.....
September	64,639	60,285	53,487	.....
October	161,132	147,080	58,100	.....
November	67,774	57,275	53,565	.....
December	58,755	53,089	52,025	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1926	1927	1928	1929
January	156,056	141,227	146,465	165,721
February	159,488	138,534	167,368	159,387
March	150,239	133,777	158,883	161,474
April	152,374	140,227	172,935	169,737
May	160,998	144,594	180,559	184,281
June	160,267	149,772	188,024	185,404
July	160,045	161,850	189,470	.....
August	151,929	188,653	192,853	.....
September	158,915	144,218	194,136	.....
October	161,132	147,036	176,000	.....
November	172,608	150,975	176,898	.....
December	136,428	144,504	173,572	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1927	1928	1929
January	9,718,008	12,276,710	7,596,564
February	10,119,162	12,180,419	8,738,835
March	10,794,044	12,239,725	9,002,058
April	11,112,295	11,740,135	8,978,173
May	11,359,381	11,692,468	8,903,560
June	11,493,673	11,287,678	8,921,275
July	11,458,128	10,819,331	.....
August	11,989,115	10,236,743	.....
September	12,212,716	9,660,910	.....
October	12,047,661	9,229,709	.....
November	11,939,740	8,366,553	.....
December	12,340,297	7,539,555	.....

Franklin Pipe Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1928—	Runs	Shipments	Stocks
June	3,153.08	2,779.02	17,922.55
July	3,902.50	3,628.02	17,197.06
August	3,874.11	3,350.13	17,721.04
September	3,520.31	3,255.43	15,286.93
October	1,289.93	538.89	17,551.93
November	1,663.53	788.47	19,426.99
December	3,053.60	3,167.53	19,426.99
1929—			
January	3,099.90	.....	19,313.06
February	2,469.47	6,873.20	17,009.23
March	3,330.82	3,595.01	16,745.04
April	4,864.07	4,243.59	17,365.52
May	2,688.59	2,455.54	17,598.57

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, July 1	2,538,116.68
Runs from wells	543,196.34
Other receipts	664,331.85
Regular deliveries	776,354.88
Other deliveries	352,697.17

The amount of Illinois oil run by the Tidewater Pipe Co. in June was 25,258.36 bbls. Deliveries were 42,491.09 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1928—	Runs	Deliveries
July	612,286.49	565,678.37
August	639,074.85	671,864.02
September	570,307.91	737,293.50
October	626,147.64	626,290.40
November	576,332.88	702,589.93
December	584,633.00	491,517.26
1929—		
January	570,727.38	545,084.66
February	517,330.17	503,387.70
March	728,319.67	586,049.66
April	615,374.27	664,297.96
May	608,981.60	673,812.83
June	568,454.70	818,845.97

Tidewater Pipe Co., Ltd., also delivered in June 108,920.66 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls per day—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans Port Arthur Baton Rouge	Sabine Pass	Tampa	Total	Total all ports
January	15,838	.....	16,676	11,838	7,938	52,290	.....	.....	.....	.....	5,161	57,451
February	14,214	.....	28,750	17,250	11,607	81,821	.....	.....	.....	.....	3,750	85,571
March	19,903	968	21,258	18,581	7,355	78,065	.....	.....	.....	.....	.....	78,065
April	16,667	.....	32,333	13,233	2,234	64,467	.....	.....	.....	.....	7,333	55,200
May	16,226	2,416	31,326	10,806	2,129	62,903	.....	.....	.....	.....	.....	62,903
June	14,866	3,167	23,100	10,300	6,100	57,533	.....	.....	.....	.....	.....	57,533

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls per day—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans Port Arthur Baton Rouge	Sabine Pass	Tampa	Total	Total all ports
January	11,936	8,902	130,065	34,871	15,709	201,484	.....	34,808	4,093	1,287	40,193	241,677
February	13,750	15,071	135,179	32,750	17,893	214,643	.....	34,357	821	143	35,321	249,964
March	18,548	26,064	145,516	39,162	28,162	257,452	.....	42,581	2,322	.....	44,903	302,355
April	19,733	18,367	127,233	50,267	32,567	248,167	6,867	25,066	10,367	1,500	43,800	291,967
May	29,806	19,258	138,000	49,936	22,323	259,323	6,677	26,323	3,000	1,323	37,323	296,646
June	31,433	8,667	134,600	42,967	18,300	235,967	8,600	22,633	11,800	2,033	45,066	281,033

GROSS PRODUCTION IN THE UNITED STATES FOR 12 MONTHS (REVISED)

(In barrels of 42 gallons)

1928-29		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
July:	Month	19,754,458	18,809,188	22,055,737	3,171,548	2,792,139	2,238,090	2,492,586	3,487,000	74,800,746
	Daily average	637,241	606,748	711,475	102,308	90,069	72,131	80,406	112,484	2,412,927
August:	Month	19,444,899	20,840,804	22,329,131	3,147,058	2,711,787	1,989,264	2,561,340	3,556,000	76,590,783
	Daily average	627,255	672,284	720,448	101,518	87,477	64,170	82,640	114,709	2,470,670
September:	Month	18,908,189	22,456,860	21,554,269	3,047,250	2,540,070	1,830,225	2,432,430	3,229,000	75,998,273
	Daily average	630,272	748,562	718,207	101,575	84,669	61,007	81,047	104,300	2,533,279
October:	Month	19,430,992	23,481,071	22,176,853	3,058,460	2,652,454	1,836,221	2,571,322	3,612,000	78,769,903
	Daily average	626,806	755,841	715,376	98,660	85,564	59,233	82,962	116,516	2,540,964
November:	Month	19,907,526	22,078,680	20,791,798	2,977,800	2,476,080	1,801,914	2,388,870	3,348,000	75,770,668
	Daily average	663,584	735,956	693,059	99,260	82,536	60,064	79,629	111,600	2,505,689
December:	Month	21,574,703	22,425,722	22,180,102	2,988,400	2,521,571	1,846,841	2,289,040	3,581,000	79,407,379
	Daily average	695,958	723,410	715,487	96,400	81,341	59,576	73,840	115,516	2,561,528
January:	Month	23,385,929	22,575,874	22,412,226	2,861,641	2,458,526	1,807,887	2,076,070	3,439,000	83,013,163
	Daily average	754,385	728,254	755,233	92,311	79,146	58,318	66,970	110,936	2,645,554
February:	Month	22,300,707	20,464,164	20,816,209	2,557,968	2,154,194	1,569,930	1,965,656	3,113,000	74,941,228
	Daily average	796,454	730,863	743,484	91,356	76,936	56,068	70,202	111,184	2,676,472
March:	Month	24,324,729	20,838,262	24,358,592	2,951,076	2,303,734	1,756,153	2,195,823	3,586,000	83,314,359
	Daily average	784,669	672,202	784,669	95,196	74,314	56,650	70,838	115,677	2,655,302
April:	Month	23,295,060	20,236,290	23,493,097	3,112,740	2,188,680	1,702,479	2,085,030	3,524,000	79,636,376
	Daily average	776,502	674,543	783,102	103,758	72,956	56,750	69,501	117,467	2,654,546
May:	Month	24,053,351	21,345,453	24,489,101	3,665,099	2,220,158	1,713,261	2,252,522	3,879,000	83,617,945
	Daily average	775,915	688,563	789,965	118,229	71,618	55,267	72,662	125,129	2,697,353
June:	Month	24,624,627	20,561,113	24,698,029	3,636,150	2,112,270	1,699,581	2,180,752	3,887,000	83,399,521
	Daily average	820,821	685,371	823,267	121,205	70,337	56,653	72,692	129,567	2,779,984
	Total 12 Months	261,005,160	256,062,480	272,365,144	37,175,190	29,126,633	21,791,846	27,492,441	42,241,000	947,259,344
	Daily average	715,083	701,541	746,207	101,850	79,799	59,704	75,322	115,739	2,595,231

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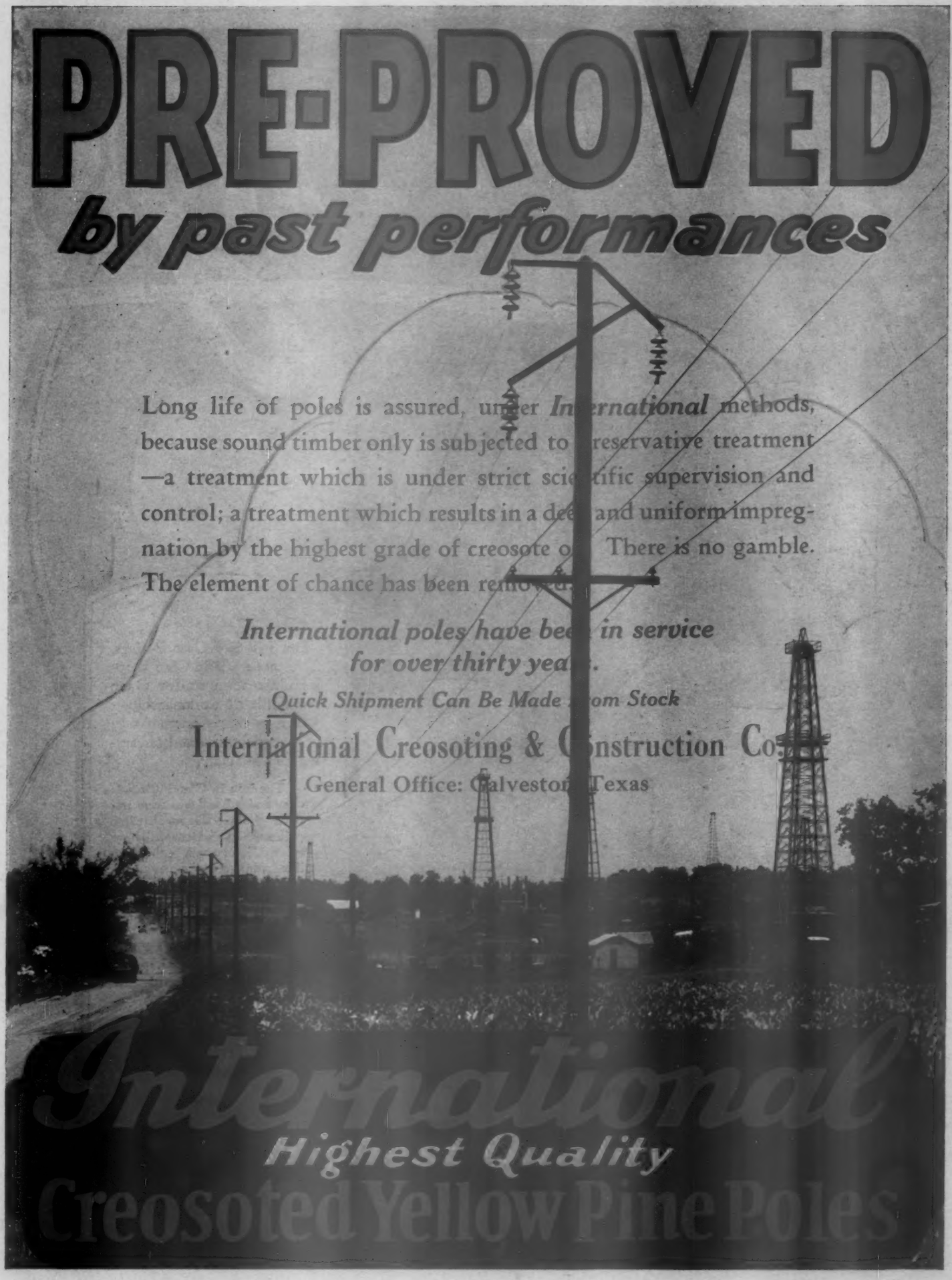

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